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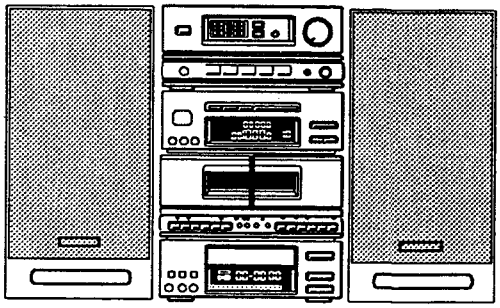
AIWA®

NSX-D5

SERVICE MANUAL



COMPACT DISC STEREO SYSTEM

- BASIC TAPE MECHANISM : α – 14MK II
- BASIC CD MECHANISM : KSL – 210AFM
- TYPE. E,K,Z

SYSTEM	AMPLIFIER TUNER	CASSETTE DECK CD PLAYER	REMOTE CONTROLLER	SPEAKER
E,K,Z TYPE	RX – N5	FD – N5	RC – TN5L	SX – N5

AIWA Co., Ltd.

Tokyo Japan

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SPECIFICATIONS

STEREO RECEIVER RX – N5

< FM section >

Frequency range	87.5MHz to 108MHz
Usable sensitivity (IHF)	2.2 μV(75 ohms) 18.2dBf
Alternate channel selectivity	E,K : 50dB (± 400kHz)
	Z : 60dB(± 300kHz)
Signal to noise ratio	70dB(STEREO)
	78dB(MONO)
Harmonic distortion	0.3 %(MONO),1kHz
	0.8 %(STEREO),1kHz
Frequency response	20Hz to 15kHz
	(+0.5dB,–3dB)
Stereo separation	40dB at 1kHz
Antenna	75ohms(unbalanced)

< MW section >

Frequency range	522kHz to 1,611kHz
Usable sensitivity	400 μ V/m
Selectivity	22dB (9kHz)
Signal to noise ratio	53dB (100dB input)
Antenna	Loop antenna

< LW section >

Frequency range	144kHz to 290kHz
Usable sensitivity	1000 μ V/m
Antenna	Loop antenna

< Timer section >

Program timer	"Once"and/ or "every"
Sleep timer	capable of setting in 10 – minute decrements, 99minutes maximum

< Amplifier section >

Power output	50W + 50W
	(6 ohms,T.H.D.10 %, RMS)
	40W + 40W
	(6 ohms,T.H.D.1 %, DIN)
Harmonic distortion	0.05 % (30W, 1kHz, 6 ohms)
Input sensitivity (load impedance)	
	DAT/VIDEO1 : 300mV
	(47k ohms)
	VIDEO2 : 500mV
	(47k ohms)
Signal to noise ratio	84dB

< General >

Power requirements	E,Z : 220V AC, 50Hz
	K : 240V AC, 50Hz
Power consumption	220W (System total 240W)
Dimensions (W × H × D)	260 × 190 × 323 mm
Weight	5.6kg

COMPACT DISC STEREO CASSETTE DECK FD – N5

< Cassette deck section >

Track format	4 tracks, 2 channels
Frequency response	METAL tape : 20 – 17000Hz
	CrO2 tape : 20 – 16000Hz
	Normal tape : 20 – 15000Hz
Signal to noise ratio	65dB (DOLBY NR ON, METAL tape peak level above 5kHz)
Wow and flutter	0.12 %(WRMS)±0.19 (WPEAK)
Tape speed	4.8cm/sec.
	9.5cm/sec.(double speed)
Rewind time	120sec. (C – 60)
Fast forward time	120sec. (C – 60)
Recording system	AC bias
Erase system	AC erase
Motor	DC servomotor × 2
Heads	Playback head × 1 (deck1)
	Record/playback/ erase head × 1 (deck2)

< CD player section >

Disc	Compact disc
Scanning method	Non contact optical scanner (semiconductor laser application)
Laser	Semiconductor laser (λ = 780nm)
Rotation speed	Approx.500rpm – 200rpm (CLV)
	Approx.1000rpm – 400rpm (CLV,double speed,E and Z modelonly)
Error correction	Cross Interleave, Reed Solomon code
No.of channels	2 channels
D – A conversion	16–bit linear
Wow/Flutter	Unmeasurable
Signal to noise ratio	90dB (1kHz, 0dB)
Harmonic distortion	0.05 % (1kHz, 0dB)
Low pass filter	8 times digital filter + active filter
Dimensions (W × H × D)	260 × 190 × 309.5 mm
Weight	4.5kg

SPEAKER SX – N5

Cabinet type	3 way, bass reflex
Speaker	130 mm cone type woofer
	60 mm cone type tweeter
	30 mm ceramic type super tweeter
Impedance	6 ohms
Music power	70W
Output sound pressure level	87dB/W/m
Dimensions (W × H × D)	190 × 380 × 235mm
Weight	4.5kg

COMMON SECTION

Power requirements	E,Z : 220V AC, 50Hz
	K : 240V AC, 50Hz
Dimensions (W × H × D)	640 × 380 × 323 mm (vertical placement)
	1280 × 190 × 323mm (horizontal placement)
Weight	19.1kg

- Design and specifications are subject to change without notice.
- Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
- "Dolby", the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
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- Under license from BBE Sound, Inc.

MODEL NO.

RX – N5

ELECTRICAL MAIN PARTS LIST (RX – N5)

REF. NO.	PART NO.	DESCRIPTION
=== IC ===		
	87-001-440-019	IC, BA15218N
	87-001-347-010	IC, HD14051BP
	87-001-942-019	IC, LA1265S(G)
	80-MT3-633-010	IC, LC6538D-4597
	87-001-376-019	IC, LC7218
	87-027-895-010	IC, M5218AL
	87-001-790-010	IC, SBX1610-52(REMOTE SENSOR)
	87-001-582-019	IC, STK4152-MK2
	87-020-446-019	IC, TA7343AP
	87-027-938-019	IC, TC4053BP
	87-001-883-010	IC, XR-C5424B
=== TRANSISTOR ===		
	89-502-094-019	FET, 2SK209Y
	89-502-115-010	FET, 2SK211GR
	89-502-465-019	FET, 2SK246GR
	89-503-025-010	FET, 2SK302GR
	87-026-463-019	TRANSISTOR, 2SA933S RS
	89-113-187-819	TRANSISTOR, 2SA1318TU
	87-213-302-019	TRANSISTOR, 2SB1330Q
	89-213-702-019	TRANSISTOR, 2SB1370E
	87-026-462-019	TRANSISTOR, 2SC1740S RS
	89-318-155-019	TRANSISTOR, 2SC1815GR
	89-327-125-019	TRANSISTOR, 2SC2712GR
	89-327-143-019	TRANSISTOR, 2SC2714(O)
	89-332-665-019	TRANSISTOR, 2SC3266GR
	89-333-317-819	TRANSISTOR, 2SC3331TU
	89-406-555-019	TRANSISTOR, 2SD655E
	87-026-230-019	TRANSISTOR, DTA114YK
	87-026-214-019	TRANSISTOR, DTA114YS
	87-026-219-019	TRANSISTOR, DTA144ES
	87-026-484-019	TRANSISTOR, DTC123JS
=== DIODE ===		
	87-001-783-019	DIODE, 1N4002-T
	87-001-574-010	DIODE, 1SR139-200
	87-020-691-019	DIODE, 1SS132
	87-020-465-019	DIODE, 1SS133
	87-020-125-019	DIODE, CHIP 1SS181
	87-020-027-019	DIODE, CHIP 1SS184
	87-002-225-019	DIODE, DBF40C-K10
	87-027-301-019	DIODE, ZENER HZ3A1
	87-027-416-019	DIODE, ZENER HZ3C2
	87-027-332-019	DIODE, ZENER HZ6B1L
	87-001-916-019	DIODE, ZENER UTZJ10B
	87-001-909-019	DIODE, ZENER UTZJ24B
	87-001-915-019	DIODE, ZENER UTZJ6.8A
=== TUNER CIRCUIT BOARD SECTION ===		
C1	★87-010-312-019	CAP, CHIP S 15P-50 CH
C2	★87-015-819-019	CAP, CHIP 0.01
C3	★87-010-197-019	CAP, CHIP S 0.01-25 B
C4	★87-010-197-019	CAP, CHIP S 0.01-25 B
C5	★87-010-197-019	CAP, CHIP S 0.01-25 B
C6	★87-010-197-019	CAP, CHIP S 0.01-25 B
C7	★87-010-150-019	CAP, CHIP S 6P-50 CH(E, K)
C7	★87-010-147-010	CAP, CHIP S 3P-50 CH(Z)
C8	★87-018-102-019	CAP, CERA-SOL U 6.8P-50 SL(E, K)
C9	★87-010-158-019	CAP, CHIP S 22P-50 SL
C10	★87-010-154-019	CAP, CHIP S 10P-50 CH
C11	★87-010-312-019	CAP, CHIP S 15P-50 CH
C12	★87-010-312-019	CAP, CHIP S 15P-50 CH
C13	★87-010-197-019	CAP, CHIP S 0.01-25 B
C14	★87-010-146-019	CAP, CHIP S 2P-50 CH
C15	★87-010-145-019	CAP, CHIP S 1P-50 CH(E, K)
C15	★87-010-148-010	CAP, CHIP S 4P-50 CH(Z)
C16	★87-010-154-019	CAP, CHIP S 10P-50 CH(E, K)
C16	★87-010-149-010	CAP, CHIP S 5P-50 CH(Z)
C17	★87-010-197-019	CAP, CHIP S 0.01-25 B
C18	★87-010-170-019	CAP, CHIP S 220P-50 SL
C19	★87-010-197-019	CAP, CHIP S 0.01-25 B
C20	★87-010-197-019	CAP, CHIP S 0.01-25 B
C21	★87-010-197-019	CAP, CHIP S 0.01-25 B
C22	★87-010-400-019	CAP, ELECT 0.47-50 SME
C23	★87-010-197-019	CAP, CHIP S 0.01-25 B
C24	★87-010-149-019	CAP, CHIP S 5P-50 CH
C25	★87-010-197-019	CAP, CHIP S 0.01-25 B(E, K)
C26	★87-010-312-019	CAP, CHIP S 15P-50 CH
C27	★87-010-197-019	CAP, CHIP S 0.01-25 B
C30	★87-010-401-019	CAP, ELECT 1-50 SME
C31	★87-010-197-019	CAP, CHIP S 0.01-25 B
C32	★87-010-197-019	CAP, CHIP S 0.01-25 B
C33	★87-010-405-019	CAP, ELECT 10-50 SME
C34	★87-010-166-019	CAP, CHIP S 100P-50 SL
C35	★87-010-197-019	CAP, CHIP S 0.01-25 B
C36	★87-010-401-019	CAP, ELECT 1-50 SME
C37	★87-010-404-019	CAP, ELECT 4.7-50 SME
C38	★87-010-405-019	CAP, ELECT 10-50 SME
C39	★87-010-544-019	CAP, ELECT 0.1-50
C40	★87-010-403-019	CAP, ELECT 3.3-50 SME
C41	★87-010-404-019	CAP, ELECT 4.7-50 SME
C42	★87-010-404-010	CAP ELECT 4.7-50 SME(Z)
C43	★87-010-197-019	CAP, CHIP S 0.01-25 B
C45	★87-010-404-019	CAP, ELECT 4.7-50 SME
C46	★87-010-197-019	CAP, CHIP S 0.01-25 B
C47	★87-010-197-019	CAP, CHIP S 0.01-25 B
C48	★87-010-197-019	CAP, CHIP S 0.01-25 B
C49	★87-010-197-019	CAP, CHIP S 0.01-25 B
C50	★87-010-197-019	CAP, CHIP S 0.01-25 B
C51	★87-010-197-019	CAP, CHIP S 0.01-25 B
C52	★87-010-197-019	CAP, CHIP S 0.01-25 B
C53	★87-010-196-019	CAP, CHIP S0.1-25 F
C54	★87-010-197-019	CAP, CHIP S 0.01-25 B
C55	★87-014-049-019	CAP PP 470P-100J
C56	★87-010-158-019	CAP, CHIP S 22P-50 CH
C57	★87-010-169-019	CAP CHIP S 180P-50 SL
C58	★87-014-050-019	CAP PP 510P-100J
C60	★87-010-404-010	CAP ELECT 4.7-50 SME(Z)
C61	★87-010-401-019	CAP, ELECT 1-50 SME
C62	★87-010-403-019	CAP, ELECT 3.3-50 SME
C63	★87-014-057-019	CAP, PP 1000P-100 J
C64	★87-010-405-019	CAP, ELECT 10-50 SME
C67	★87-010-179-019	CAP, CHIP S 1200P-50 B
C68	★87-010-179-019	CAP, CHIP S 1200P-50 B
C69	★87-010-400-019	CAP, ELECT 0.47-50 SME
C70	★87-010-400-019	CAP, ELECT 0.47-50 SME
C71	★87-010-184-019	CAP, CHIP S 3300P-50 B
C72	★87-010-184-019	CAP, CHIP S 3300P-50 B
C73	★87-010-401-019	CAP, ELECT 1-50 SME
C74	★87-010-401-019	CAP, ELECT 1-50 SME
C75	★87-010-248-019	CAP, ELECT 220-10 SME
C76	★87-010-312-019	CAP, CHIP S 15P-50 CH
C77	★87-010-197-019	CAP, CHIP S 0.01-25 B
C78	★87-010-197-019	CAP, CHIP S 0.01-25 B
C79	★87-010-197-019	CAP, CHIP S 0.01-25 B
C80	★87-010-384-019	CAP, ELECT 100-25 SME

REF. NO.	PART NO.	DESCRIPTION
C81	★87-010-186-019	CAP, CHIP S 4700P-50 B
C82	★87-010-400-019	CAP, ELECT 0.47-50 SME
C83	★87-015-762-019	CAP, CHIP 68P SL
C84	★87-010-164-019	CAP, CHIP S 68P-50 SL
C85	★87-010-164-019	CAP, CHIP S 68P-50 SL
C86	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C87	★87-010-263-019	CAP, ELECT 100-10
C88	★87-010-263-019	CAP, ELECT 100-10
C89	★87-010-263-019	CAP, ELECT 100-10
C90	★87-018-131-019	CAP, CERA-SOL U 1000P-50 B
C100	★87-010-197-019	CAP, CHIP S 0.01-25 B
C101	★87-010-197-019	CAP, CHIP S 0.01-25 B
C102	★87-010-311-019	CAP, CHIP S 12P-50 CH
C103	★87-010-197-019	CAP, CHIP S 0.01-25 B
C105	★87-010-146-019	CAP, CHIP S 2P-50 CH(Z)
C106	★87-010-145-019	CAP, CHIP S 1P-50 CH(Z)
CF1	87-030-105-010	FILTER, BPM B6A(Z)
CF2	87-799-621-010	FILTER, CERAMIC MS2-A(Z)
CF3	87-008-261-019	FILTER, SFE10.7MA5-A
CF4	87-008-261-019	FILTER, SFE10.7MA5-A
CF5	82-794-670-019	FILTER, BFU 450C4N
D1	87-026-360-010	VARICAP, CHIP KV1430
D2	87-026-360-010	VARICAP, CHIP KV1430
D3	87-026-360-010	VARICAP, CHIP KV1430
D6	81-754-634-010	VARICAP, KV1260
D7	87-026-360-010	VARICAP, CHIP KV1430(Z)
J1	81-631-646-019	ANT TERM 2P (FM75Ω)(E, K)
J1	81-631-646-019	ANT TERM 2P (FM75Ω, MW/LW LOOP)(Z)
J2	81-754-629-019	CONNECTOR XH(MW/LW LOOP)(E, K)
L1	★87-006-209-019	COIL, ANT FM 3/4 T
L2	★87-006-210-019	COIL, ANT FM 2-3/4T
L3	★87-006-200-019	COIL, RF FM 3-1/2T
L4	★87-006-201-019	COIL, RF FM 3-1/2T
L5	★87-006-201-019	COIL, FM RF 3-1/2T(Z)
L6	★87-006-205-019	COIL, OSC FM (7K)
L7	★87-003-231-019	COIL, CHIP S1UH
L8	★87-008-427-019	COIL, FM IFT(4T)
L9	★81-631-611-019	COIL, QUAD (SINGLE)
L11	★87-008-452-019	FILTER, CFAZ-450
L12	★87-006-207-019	COIL, ANT MW
L13	★87-006-208-019	COIL, ANT LW
L14	★87-794-687-019	COIL, OSC MW
L15	★81-631-643-019	COIL, 1 POLE MPX
L16	★81-631-643-019	COIL, 1 POLE MPX
L17	★87-794-688-019	COIL, OSC LW
L18	★87-008-421-019	FILTER, ANTI BIRDY(Z)
L19	★87-003-098-019	COIL, 2.2UH
SFR1	★87-024-174-019	SFR, 33K
SFR2	★87-024-171-019	SFR, 4.7K
TC1	★87-011-219-019	CAP, TRIMMER 10PF
TC2	★87-011-219-019	CAP, TRIMMER 10PF
TC3	★87-011-219-010	CAP, TRIMMER 10PF(Z)
TC4	★87-011-220-010	CAP, TRIMMER 20PF
TC5	★87-011-219-019	CAP, TRIMMER 10PF
TC6	★87-011-221-010	CAP, TRIMMER 30PF
X1	87-030-163-019	RESONATOR, CRYSTAL 7.2MHZ(NDK)

=== FRONT CIRCUIT BOARD SECTION ===

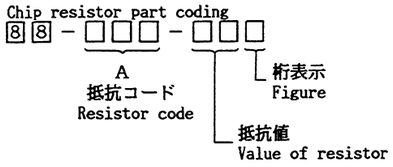
C101	★87-010-370-019	CAP, ELECT 330-6.3 SME
C102	★87-018-214-019	CAP, CERA-SOL U 0.1-50 F
C103	★87-010-251-019	CAP, ELECT 10-35 SRE
C104	★87-010-496-019	CAP, ELECT 3.3-50 5L
C105	★87-010-404-019	CAP, ELECT 4.7-50 SME
C107	★87-018-195-019	CAP, CERA-SOL U 1200P-16 X
C108	★87-018-195-019	CAP, CERA-SOL U 1200P-16 X
C109	★87-018-214-019	CAP, CERA-SOL U 0.1-50 F
C110	★87-018-214-019	CAP, CERA-SOL U 0.1-50 F
C111	★87-018-214-019	CAP, CERA-SOL U 0.1-50 F
C113	★87-018-214-019	CAP, CERA-SOL U 0.1-50 F
C201	★87-018-127-019	CAP, CERA-SOL U 470P-50 B
C202	★87-018-127-019	CAP, CERA-SOL U 470P-50 B
C203	★87-018-195-019	CAP, CERA-SOL U 1200P-16 X
C204	★87-018-195-019	CAP, CERA-SOL U 1200P-16 X
C205	★87-018-133-019	CAP, CERA-SOL U 4700P-16 X
C206	★87-018-133-019	CAP, CERA-SOL U 4700P-16 X
C207	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C208	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C209	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C210	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C211	★87-010-068-019	CAP, ELECT 0.22-50 5L
C212	★87-010-068-019	CAP, ELECT 0.22-50 5L
C213	★87-010-068-019	CAP, ELECT 0.22-50 5L
C214	★87-010-068-019	CAP, ELECT 0.22-50 5L
C215	★87-010-068-019	CAP, ELECT 0.22-50 5L
C216	★87-010-251-019	CAP, ELECT 10-35 SRE
C217	★87-010-251-019	CAP, ELECT 10-35 SRE
C218	★87-018-205-019	CAP, CERA-SOL U 0.022-25 F
C219	★87-018-214-019	CAP, CERA-SOL U 0.1-50 F
C221	★87-010-251-019	CAP, ELECT 10-35 SRE
C401	★87-015-688-019	CAP, ELECT 4.7-35 7L
C402	★87-015-688-019	CAP, ELECT 4.7-35 7L
C411	★87-018-133-019	CAP, CERA-SOL U 4700P-16 X
C412	★87-018-133-019	CAP, CERA-SOL U 4700P-16 X
C421	★87-018-127-019	CAP, CERA-SOL U 470P-50 B
C422	★87-018-127-019	CAP, CERA-SOL U 470P-50 B
C451	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C452	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C501	★87-010-497-019	CAP, ELECT 4.7-35 5L
C502	★87-010-497-019	CAP, ELECT 4.7-35 5L
C505	★87-015-695-019	CAP, ELECT 1-50 7L
C506	★87-015-695-019	CAP, ELECT 1-50 7L
C507	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C508	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C601	★87-018-195-019	CAP, CERA-SOL U 1200P-16 X
C602	★87-015-688-019	CAP, ELECT 4.7-35 7L
C603	★87-018-128-019	CAP, CERA-SOL U 560P-50 B
C604	★87-015-693-019	CAP, ELECT 0.33-50 7L
C605	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C606	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C607	★87-018-214-019	CAP, CERA-SOL U 0.1-50 F
FL101	80-MT3-620-010	FL, CF1046G(DISPLAY)
J601	80-MT3-614-019	JACK, 3.5(MIC)
L101	★87-003-152-019	COIL 100UH
L102	★87-003-152-019	COIL, 100UH
LED101	87-001-291-010	LED, SEL2413E(BBE)
LED102	87-001-291-010	LED, SEL2413E(BBE)
LED103	87-001-291-010	LED, SEL2413E(T-BASS)
LED104	87-001-291-010	LED, SEL2413E(T-BASS)
S101	87-036-142-019	TACT SW(BAND)
S102	87-036-142-019	TACT SW(UP)
S103	87-036-142-019	TACT SW(DOWN)
S104	87-036-142-019	TACT SW(TUNING MODE)
S105	87-036-142-019	TACT SW(SET)
S106	87-036-142-019	TACT SW(T-STANDBY)
S107	87-036-142-019	TACT SW(DISPLAY)
S108	87-036-142-019	TACT SW(FM MODE)
S109	87-036-142-019	TACT SW(SLEEP)

REF. NO.	PART NO.	DESCRIPTION
S110	87-036-142-019	TACT SW(CD)
S111	87-036-142-019	TACT SW(VIDEO 2)
S112	87-036-142-019	TACT SW(DAT/VIDEO 1)
S113	87-036-142-019	TACT SW(TUNER)
S114	87-036-142-019	TACT SW(TAPE)
S115	87-036-142-019	TACT SW(BBE)
S116	87-036-142-019	TACT SW(POWER)
VR301	89-MK1-634-019	VR, 10KA(BBE)
VR401	80-MT3-612-019	VR, SLIDE 20KB(70HZ)
VR403	80-MT3-612-019	VR, SLIDE 20KB(350HZ)
VR403	80-MT3-612-019	VR, SLIDE 20KB(1KHZ)
VR404	80-MT3-612-019	VR, SLIDE 20KB(3.5KHZ)
VR405	80-MT3-612-019	VR, SLIDE 20KB(10KHZ)
VR601	89-MK1-634-019	VR, 10KA(MIC MIXING)
X101	89-MX1-704-019	CERA LOCK(MU)3.9MHZ
=== AMP CIRCUIT BOARD SECTION ===		
C101	★87-010-804-019	CAP, ELECT 4700-42V
C102	★87-010-804-019	CAP, ELECT 4700-42V
C103	★87-010-390-019	CAP, ELECT 3300-25 SME
C104	★87-010-381-019	CAP, ELECT 330-16 SME
C105	★87-010-101-019	CAP, ELECT 220-16 SME
C106	★87-010-409-019	CAP, ELECT 220-50 SME
C107	★87-010-384-019	CAP, ELECT 100-25 SME
C108	★87-010-408-019	CAP, ELECT 47-50 SME
C109	★87-010-263-019	CAP, ELECT 100-10
C111	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C112	★87-010-260-019	CAP, ELECT 47-25 SME
C113	★87-010-403-019	CAP, ELECT 3.3-50 SME
C114	★87-018-214-019	CAP, CERA-SOL U 0.1-50 F
C115	★87-018-134-019	CAP, CERA-SOL U 0.01-16 Y
C116	★87-018-127-019	CAP, CERA-SOL U 470P-50 B
C117	★87-010-405-019	CAP, ELECT 10-50 SME
C118	★87-010-374-019	CAP, ELECT 47-10
C119	★87-010-405-019	CAP, ELECT 10-50 SME
C120	★87-010-381-019	CAP, ELECT 330-16 SME
C151	★87-018-131-019	CAP, CERA-SOL U 1000P-50 B
C152	★87-018-131-019	CAP, CERA-SOL U 1000P-50 B
C153	★87-010-405-019	CAP, ELECT 10-50 SME
C154	★87-010-405-019	CAP, ELECT 10-50 SME
C155	★87-010-260-019	CAP, ELECT 47-25 SME
C156	★87-010-260-019	CAP, ELECT 47-25 SME
C157	★87-010-374-019	CAP, ELECT 47-10
C158	★87-010-374-019	CAP, ELECT 47-10
C159	★87-018-214-019	CAP, CERA-SOL U 0.1-50 F
C160	★87-018-214-019	CAP, CERA-SOL U 0.1-50 F
C163	★87-018-107-019	CAP, CERA-SOL U 18P-50 SL
C164	★87-018-107-019	CAP, CERA-SOL U 18P-50 SL
C201	★87-010-221-019	CAP, ELECT 470-10
C202	★87-010-374-019	CAP, ELECT 47-10
C203	★87-010-263-019	CAP, ELECT 100-10
C204	★87-010-382-019	CAP, ELECT 22-25 SME
C205	★87-010-404-019	CAP, ELECT 4.7-50 SME
C206	★87-010-404-019	CAP, ELECT 4.7-50 SME
C207	★87-010-405-019	CAP, ELECT 10-50 SME
C208	★87-010-382-019	CAP, ELECT 22-25 SME
C301	★87-010-401-019	CAP, ELECT 1-50 SME
C302	★87-010-401-019	CAP, ELECT 1-50 SME
C305	★87-018-127-019	CAP, CERA-SOL U 470P-50 B
C306	★87-018-127-019	CAP, CERA-SOL U 470P-50 B
C309	★87-010-546-019	CAP, ELECT 0.33-50 SME
C310	★87-010-546-019	CAP, ELECT 0.33-50 SME
C311	★87-010-400-019	CAP, ELECT 0.47-50 SME
C312	★87-010-400-019	CAP, ELECT 0.47-50 SME

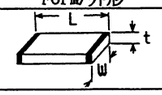
REF. NO.	PART NO.	DESCRIPTION
C313	★87-010-404-019	CAP, ELECT 4.7-50 SME
C314	★87-010-404-019	CAP, ELECT 4.7-50 SME
C317	★87-018-109-019	CAP, CERA-SOL U 22P-50 SL
C318	★87-018-109-019	CAP, CERA-SOL U 22P-50 SL
C321	★87-010-400-019	CAP, ELECT 0.47-50 SME
C322	★87-010-400-019	CAP, ELECT 0.47-50 SME
C323	★87-010-404-019	CAP, ELECT 4.7-50 SME
C324	★87-010-404-019	CAP, ELECT 4.7-50 SME
C325	★87-010-401-019	CAP, ELECT 1-50 SME
C326	★87-010-401-019	CAP, ELECT 1-50 SME
C331	★87-010-405-019	CAP, ELECT 10-50 SME
C332	★87-010-371-019	CAP, ELECT 470-6.3
C333	★87-010-101-019	CAP, ELECT 220-16 SME
C335	★87-010-404-019	CAP, ELECT 4.7-50 SME
C501	★87-010-544-019	CAP, ELECT 0.1-50
C502	★87-010-544-019	CAP, ELECT 0.1-50
C507	★87-010-546-019	CAP, ELECT 0.33-50 SME
C508	★87-010-546-019	CAP, ELECT 0.33-50 SME
C509	★87-010-401-019	CAP, ELECT 1-50 SME
C510	★87-010-401-019	CAP, ELECT 1-50 SME
C511	★87-010-402-019	CAP, ELECT 2.2-50 SME
C512	★87-010-402-019	CAP, ELECT 2.2-50 SME
C513	★87-018-202-019	CAP, CERA-SOL U 6800P-16 X
C514	★87-018-202-019	CAP, CERA-SOL U 6800P-16 X
C515	★87-010-546-019	CAP, ELECT 0.33-50 SME
C516	★87-010-401-019	CAP, ELECT 1-50 SME
C517	★87-010-400-019	CAP, ELECT 0.47-50 SME
J201	80-MT3-617-019	JACK, PIN 3P (MONI. V/REC OUT)
J202	80-MT3-618-019	JACK, PIN 3P (DAT/VIDEO 1, V/AU IN)
J203	80-MT3-617-019	JACK, PIN 3P(VIDEO 2, V/AU IN)
J204	87-009-065-019	CONNECTOR, 15P FG(CD DECK)
J205	80-MT3-615-019	JACK, 6.3(PHONES)
J206	80-MT3-616-019	JACK, PIN 2P (SURROUND SP)(E, K)
J206	80-MT3-631-019	JACK PIN 2P(SURROUND SP)(Z)
J207	87-033-215-019	TERMINAL, SP 4P(SPEAKERS)
L101	★87-005-366-019	COIL 1UH(Z)
L102	★87-005-366-019	COIL 1UH(Z)
R105	★87-022-050-019	RES, MF 0.22-1W J
R106	★87-022-050-019	RES, MF 0.22-1W J
R525	★87-022-050-019	RES, MF 0.22-1W J
R526	★87-022-050-019	RES, MF 0.22-1W J
R527	★87-022-050-019	RES, MF 0.22-1W J
R528	★87-022-050-019	RES, MF 0.22-1W J
RY101	87-045-285-010	RELAY, VB12MB
S501	80-MT3-629-019	SW, SLIDE(T-BASS)
VR201	80-MT3-619-019	VR, 50KBX2(DAT/VIDEO1 IN LEVEL)
=== POWER CIRCUIT BOARD SECTION ===		
R101	★87-025-491-019	RES, NF 0.47-3/4W
R102	★87-025-491-019	RES, NF 0.47-3/4W
R103	★87-025-491-019	RES, NF 0.47-3/4W
=== VOLUME CIRCUIT BOARD SECTION ===		
MVR501	89-MK1-632-119	VR, 50KAX2(VOLUME)
=== MISCELLANEOUS ===		
⚠	★87-034-592-018	AC CORD K(K)
⚠	★87-034-781-018	AC CORD E(E, Z)
⚠	★87-085-185-010	BUSHING, AC CORD E
⚠T101	80-MT3-626-019	POWER TRANSFORMER OMT3E(E, Z)
⚠T101	80-MT3-627-019	POWER TRANSFORMER OMT3K(K)

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

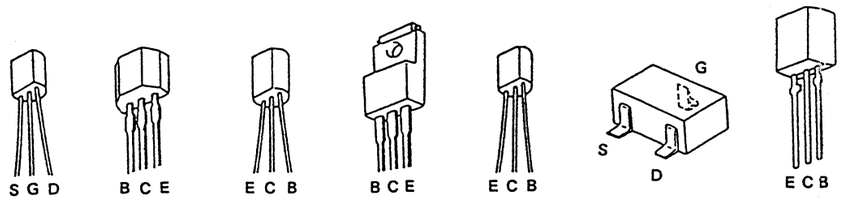
チップ抵抗部品コードの成り立ち
Chip resistor part coding



チップ抵抗
Chip resistor

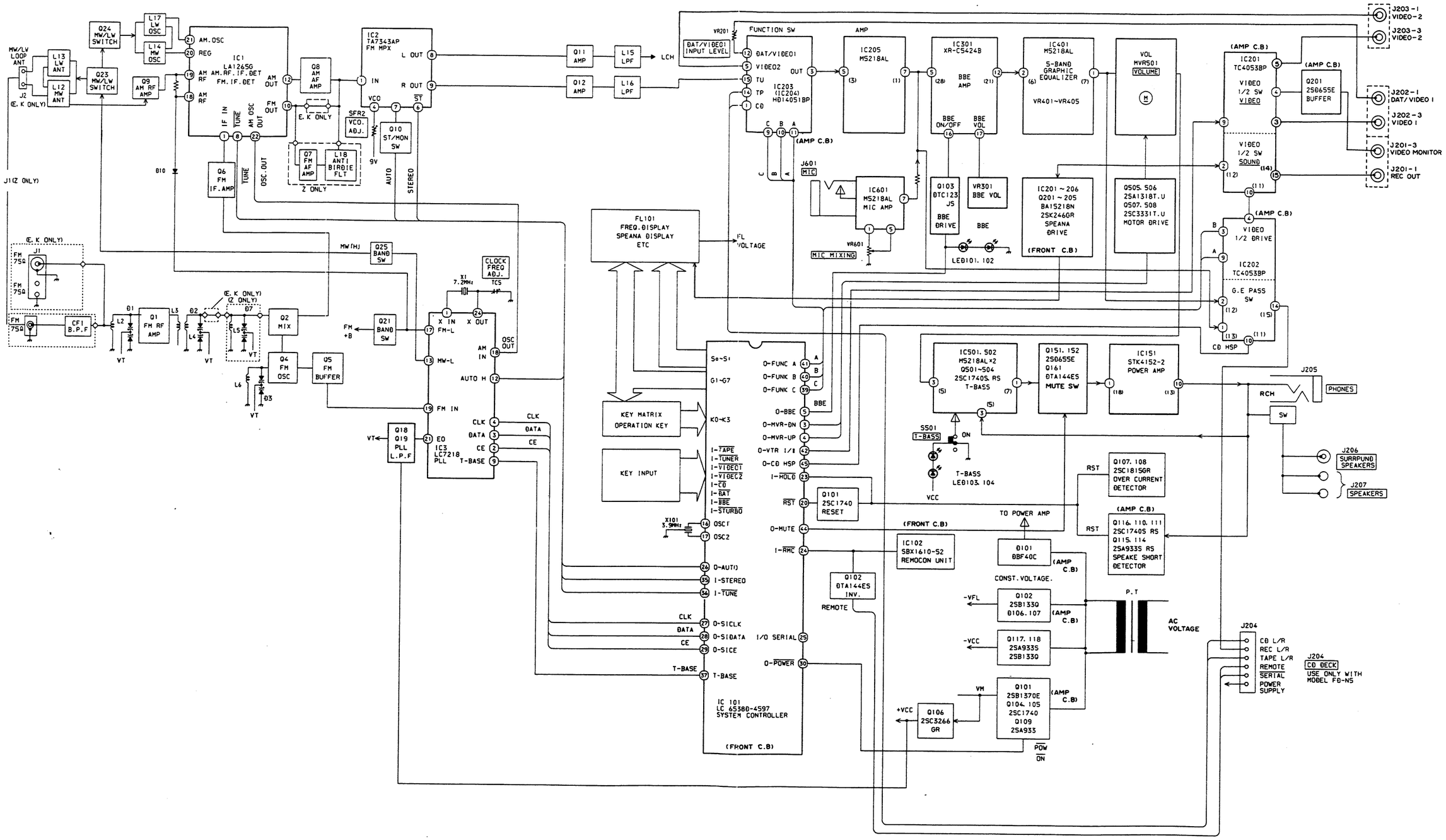
Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions／寸法(mm)				Resistor Code : A 抵抗コード : A
				Form/外形	L	W	t	
1/32W	1608	±5%	CJ		1.6	0.8	0.35	108
1/10W	2125	±5%	CJ		2	1.25	1.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.5 ～0.7	128

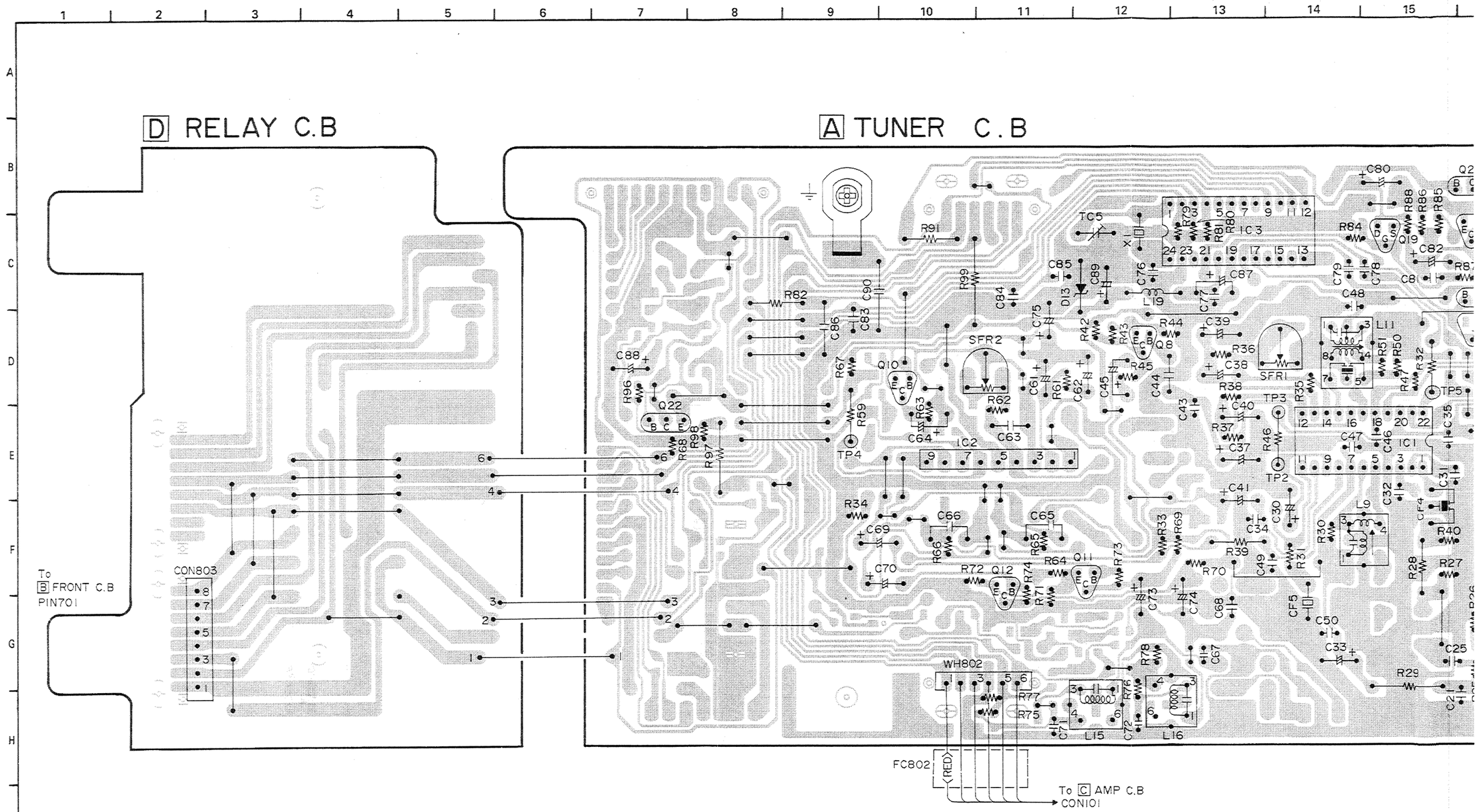
TRANSISTOR ILLUSTRATION (RX – N5, FD – N5)



2SK246 2SK373	DTA114 DTA123 DTA144 DTC123 DTC144 2SD2144	2SD655	2SB1370	2SA933 2SA952 2SA1296 2SA1318 2SC1740 2SC1815 2SC2001 2SC2500 2SC2712 2SC2714 2SC3266 2SC3331	2SK209 2SK211 2SK302	2SB1330

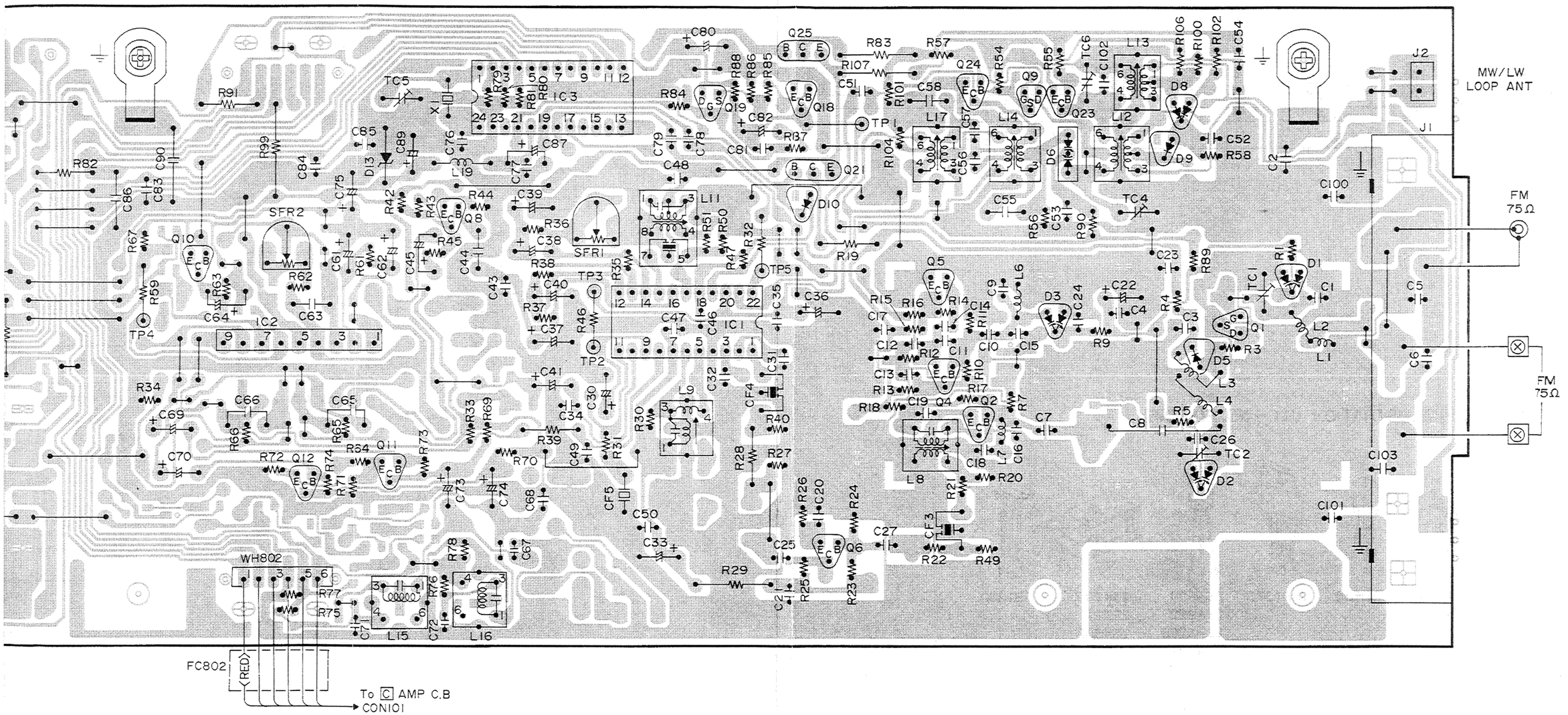
BLOCK DIAGRAM (RX – N5)




D RELAY C.B
A TUNER C.B
To B FRONT C.B PIN701
CON803
To C AMP C.B CON101
FC802 (RED)
WH802
IC1
IC2
IC3
TC5
SFR1
SFR2
TP2
TP3
TP4
TP5
L11
L15
L16
L19
Q8
Q10
Q12
Q19
Q22

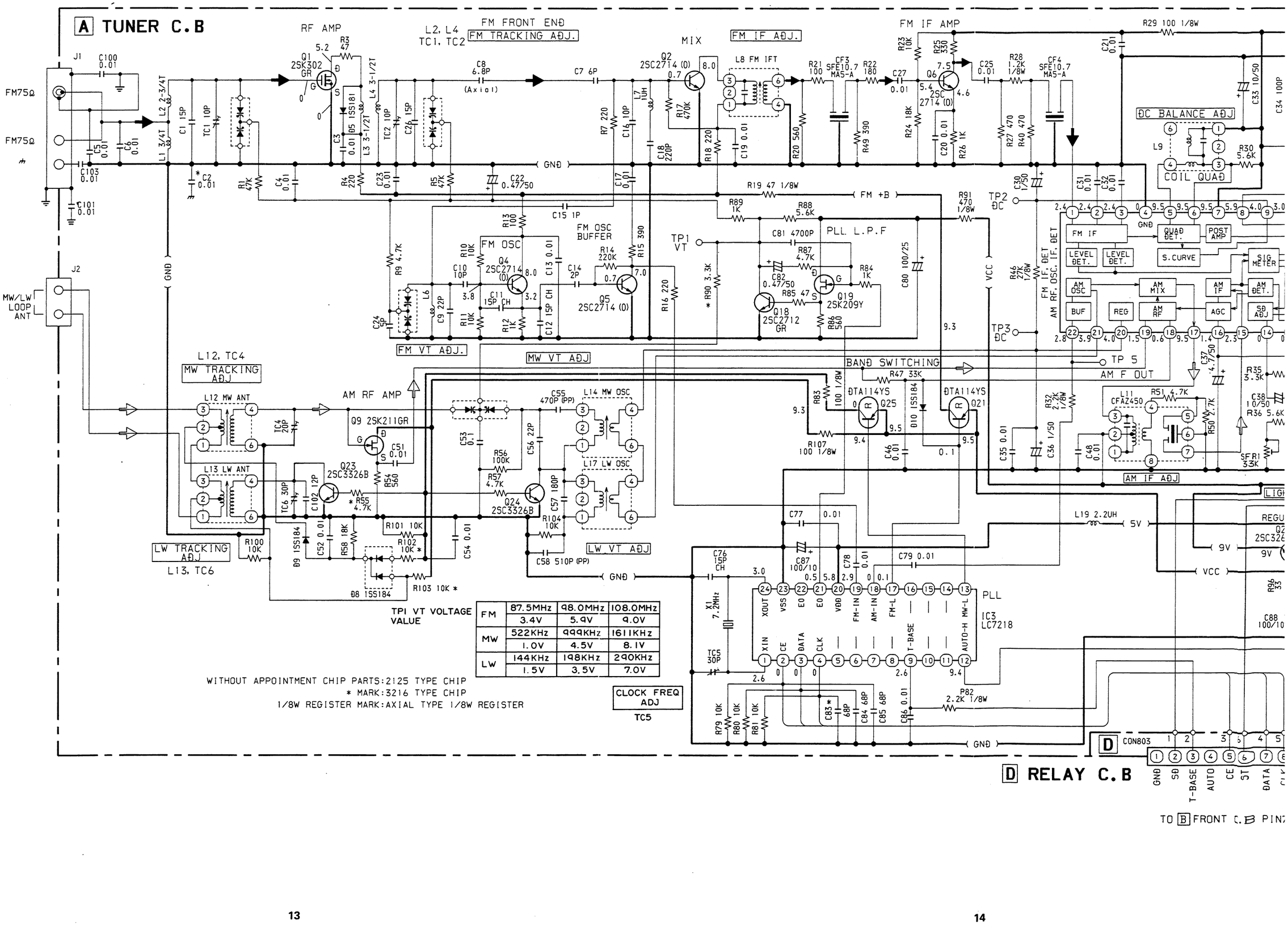
8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22

A TUNER C.B

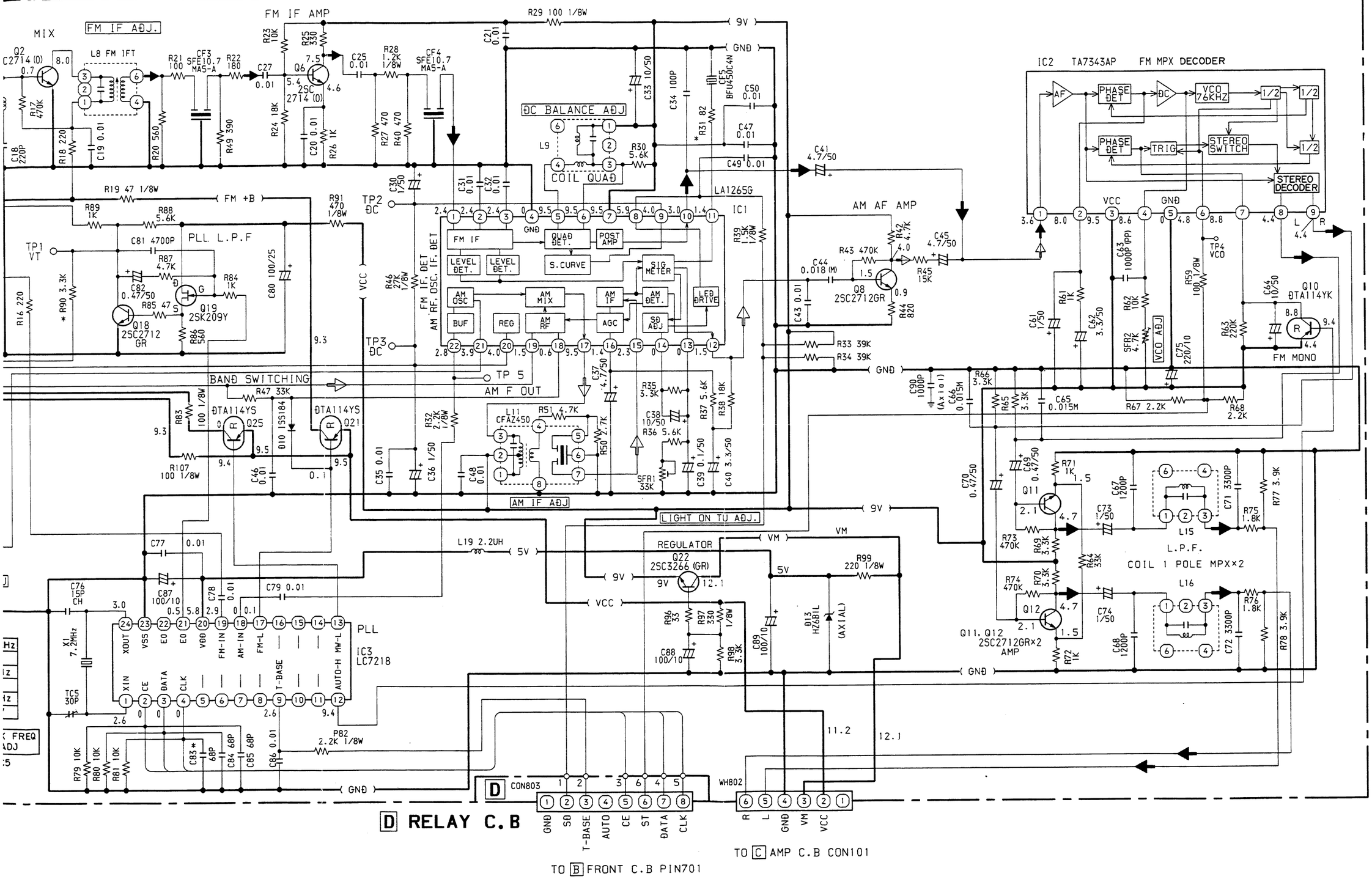


GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示はθ表示です。)

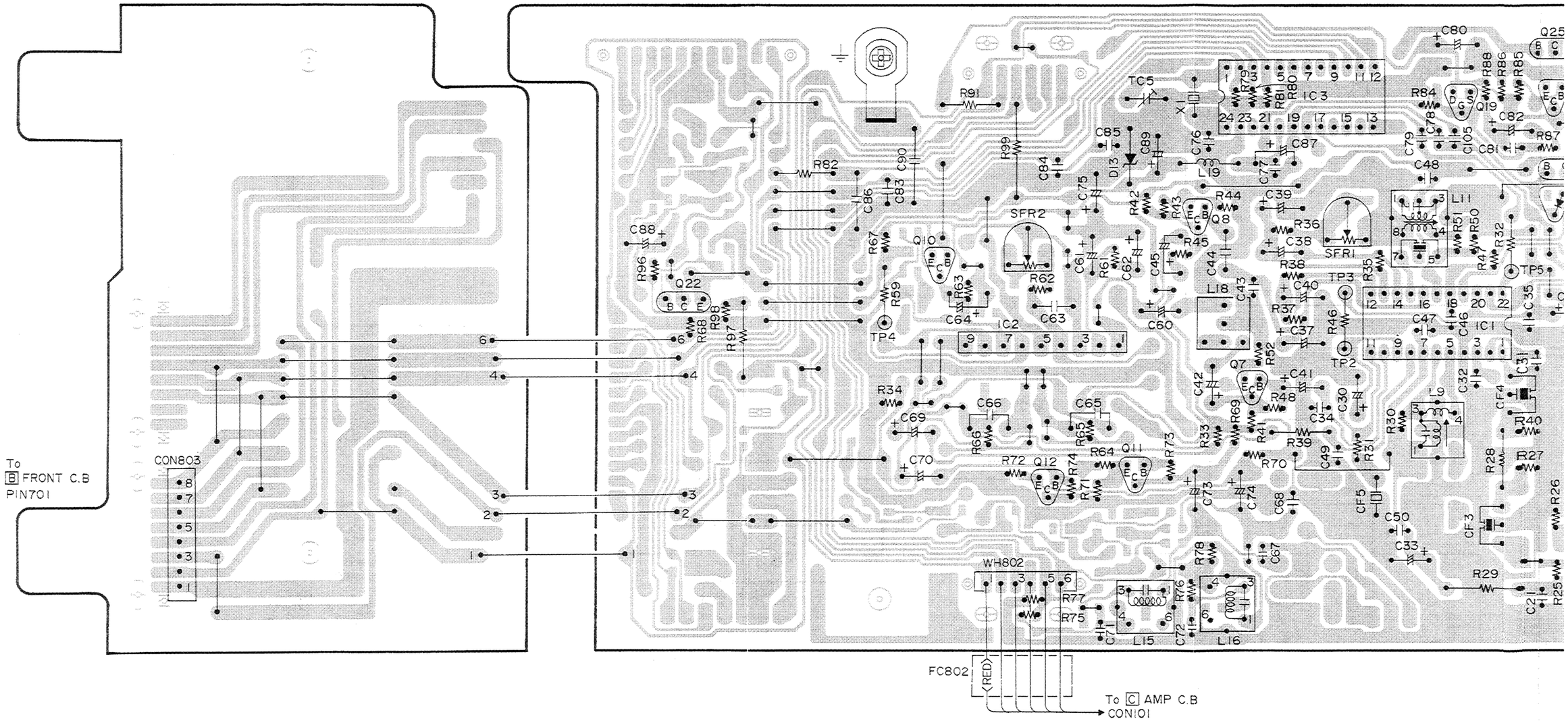


TPI VT VOLTAGE VALUE			
FM	87.5MHz	98.0MHz	108.0MHz
	3.4V	5.9V	9.0V
MW	522KHz	999KHz	1611KHz
	1.0V	4.5V	8.1V
LW	144KHz	198KHz	290KHz
	1.5V	3.5V	7.0V

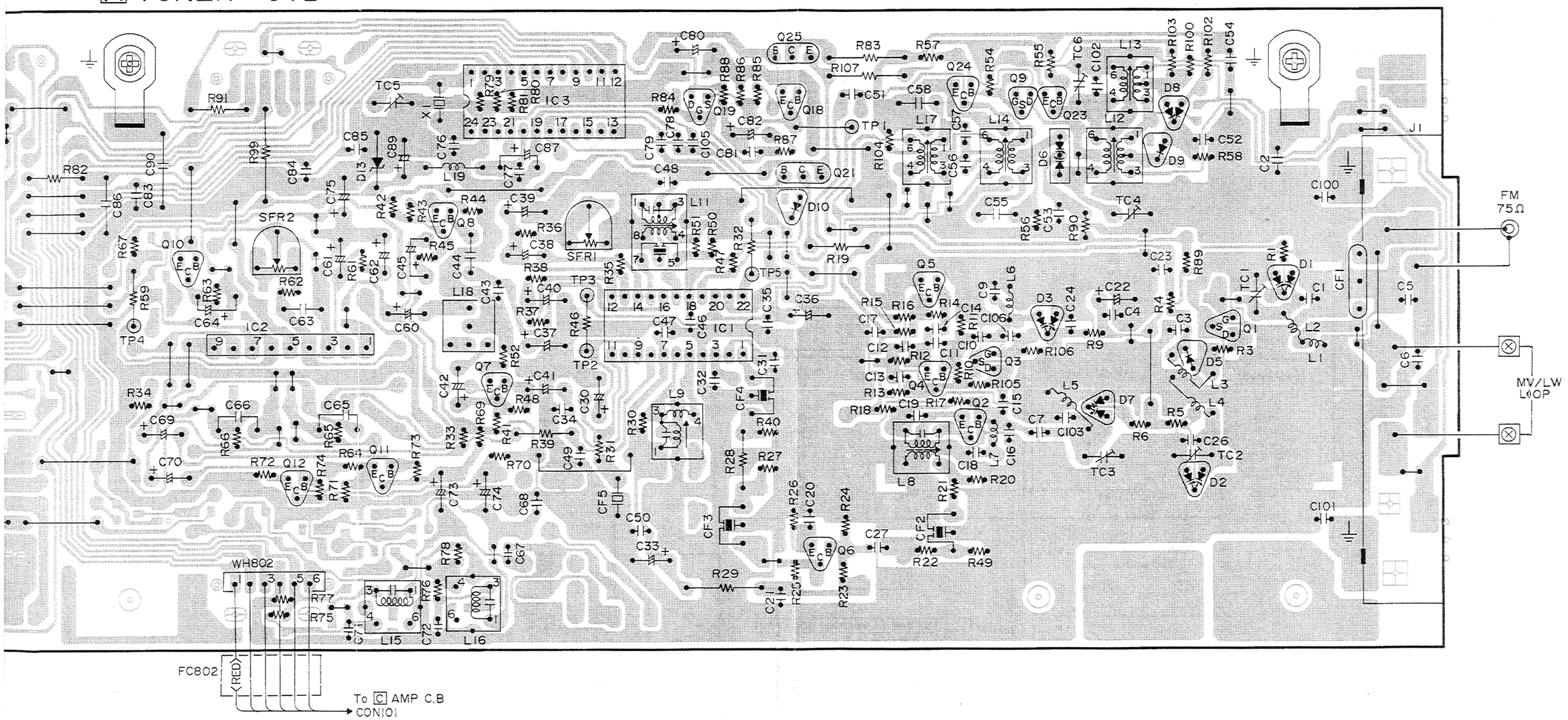

MIX
FM IF ADJ.
FM IF AMP
L8 FM IFT
CF3 SFE10.7 MA5-A
CF4 SFE10.7 MA5-A
Q2 C2714 (O)
Q6 2SC 2714 (O)
R29 100 1/8W
9V
GND
DC BALANCE ADJ
L9
COIL QUAD
LA1265G
IC1
FM IF
QUAD DET.
POST AMP
LEVEL DET.
LEVEL DET.
S.CURVE
S16 METER
AM OSC
AM MIX
AM IF
AM DET.
LED DRIVE
BUF
REG
AM RF
AGC
SD ADJ
AM RF, OSC, IF, DET
FM IF, DET
AM AF AMP
Q8 2SC2712GR
TP1 VT
TP2 DC
TP3 DC
TP4 VCO
PLL L.P.F
Q18 2SC2712 GR
Q19 2SK209Y
BAND SWITCHING
AM F OUT
AM IF ADJ
LIGHT ON TU ADJ.
IC2 TA7343AP FM MPX DECODER
AF
PHASE DET
DC
VCO 76KHZ
1/2
PHASE DET
TRIG
STEREO SWITCH
STEREO DECODER
VCC
GND
L
R
FM MONO
VCO ADJ
Q10 DTA114YK
Q11
Q12
Q11, Q12 2SC2712GR×2 AMP
L.P.F.
COIL 1 POLE MPX×2
L15
L16
REGULATOR Q22 2SC3266 (GR)
VM
5V
L19 2.2UH
D13 HZ6B1L (AXIAL)
PLL
IC3 LC7218
XIN
CE
DATA
CLK
T-BASE
AUTO-H
MW-L
XOUT
VSS
EO
VDD
FM-IN
AM-IN
FM-L
XI 7.2MHz
TC5 30P
P82 2.2K 1/8W
FREQ ADJ
D CON803
WH802
GND
SD
T-BASE
AUTO
CE
ST
DATA
CLK
R
L
GND
VM
VCC
D RELAY C.B
TO B FRONT C.B PIN701
TO C AMP C.B CON101

D RELAY C.B

A TUNER C.B

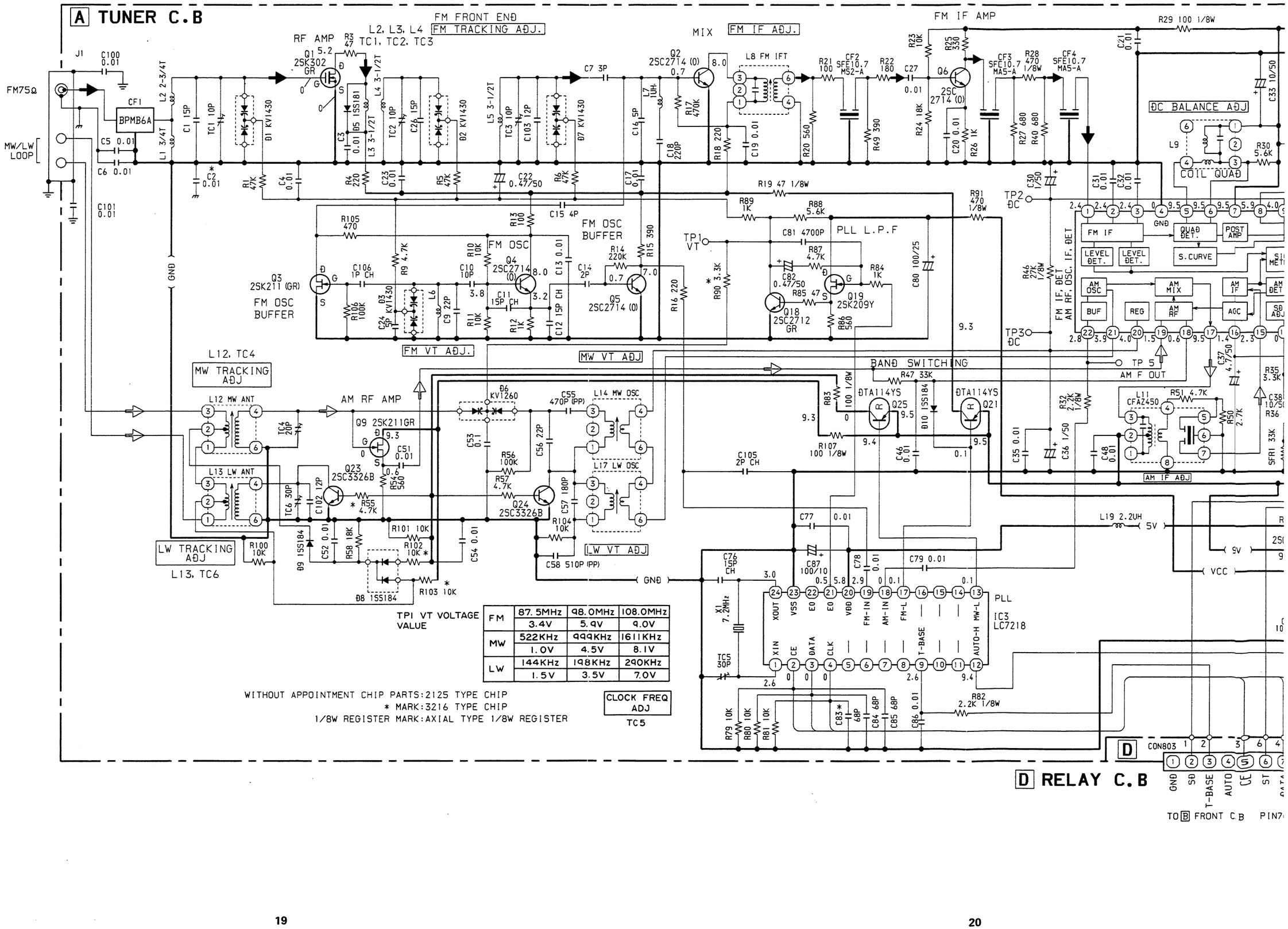


A TUNER C.B



GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示はθ表示です。)



TPI VT VOLTAGE VALUE	87.5MHz	98.0MHz	108.0MHz
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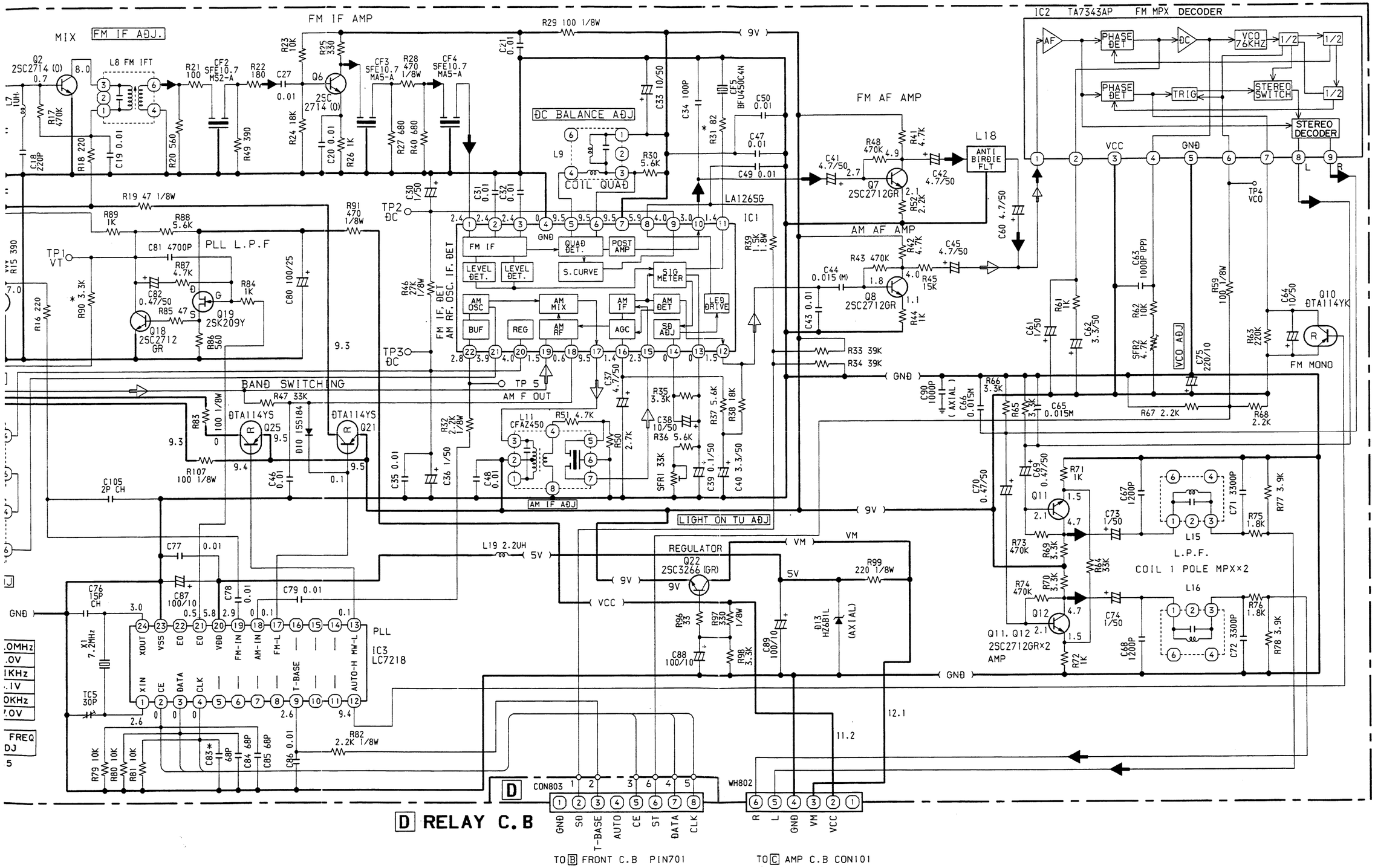
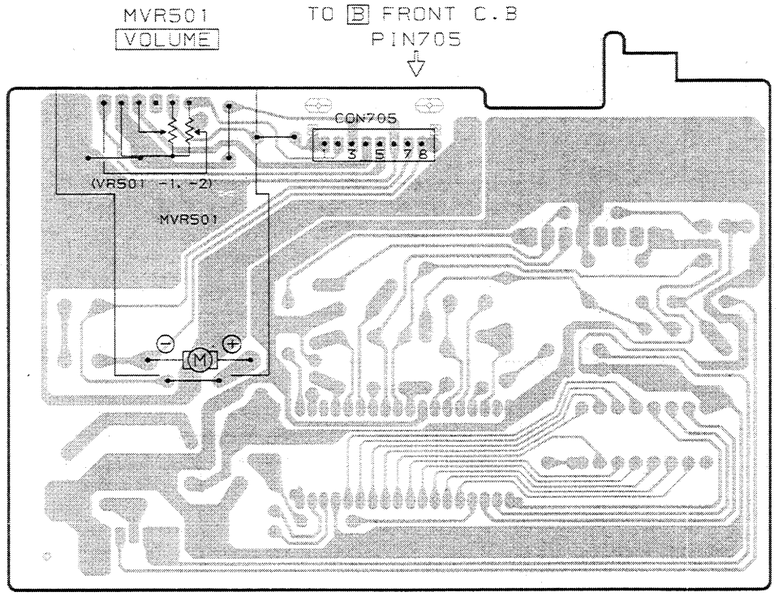
MW	522KHz	999KHz	1611KHz
	1.0V	4.5V	8.1V
LW	144KHz	198KHz	290KHz
	1.5V	3.5V	7.0V

WITHOUT APPOINTMENT CHIP PARTS:2125 TYPE CHIP
* MARK:3216 TYPE CHIP
1/8W REGISTER MARK:AXIAL TYPE 1/8W REGISTER


MIX
FM IF ADJ.
FM IF AMP
R29 100 1/8W
9V
IC2 TA7343AP FM MPX DECODER
AF
PHASE DET
DC
VCO 76KHZ
1/2
1/2
PHASE DET
TRIG
STEREO SWITCH
1/2
STEREO DECODER
VCC
GND
L
R
TP4 VCO
L8 FM IFT
Q2 2SC2714 (O)
L7 1UH
R17 470K
C18 220P
R18 220
C19 0.01
R20 560
R21 100
CF2 SFE10.7 MS2-A
R22 180
C27 0.01
R49 390
R23 10K
R25 330
Q6 2SC 2714 (O)
R24 18K
C20 0.01
R26 1K
CF3 SFE10.7 MA5-A
R27 680
R28 470 1/8W
R40 680
CF4 SFE10.7 MA5-A
C21 0.01
DC BALANCE ADJ
L9
COIL QUAD
R30 5.6K
C33 10/50
C34 100P
* R31 82
CF5 BFU450C4N
C50 0.01
C47 0.01
C49 0.01
FM AF AMP
R48 470K
R41 4.7K
C41 4.7/50
Q7 2SC2712GR
R52 2.2K
C42 4.7/50
L18 ANTI BIRDIE FLT
C60 4.7/50
AM AF AMP
R42 4.7K
C45 4.7/50
R43 470K
C44 0.015 (M)
Q8 2SC2712GR
R45 15K
R44 1K
C43 0.01
R33 39K
R34 39K
GND
C30 1/50
C31 0.01
C32 0.01
TP2 DC
LA1265G
IC1
FM IF
QUAD DET.
POST AMP
LEVEL DET.
LEVEL DET.
S.CURVE
SIG METER
AM OSC
AM MIX
AM IF
AM DET
LED DRIVE
BUF
REG
AM RF
AGC
SD ADJ
FM IF, DET
AM RF, OSC, IF, DET
R46 27K 1/8W
R39 1.5K 1.8W
TP3 DC
TP 5 AM F OUT
C37 4.7/50
R35 3.3K
C38 10/50
R36 5.6K
R37 5.6K
R38 18K
R91 470 1/8W
TP1 VT
C81 4700P
PLL L.P.F
R87 4.7K
C82 0.47/50
Q19 2SK209Y
R84 1K
R85 47
Q18 2SC2712 GR
R86 560
C80 100/25
R89 1K
R88 5.6K
R19 47 1/8W
R15 390
R16 220
* R90 3.3K
9.3
BAND SWITCHING
R47 33K
DTA114YS Q25
DTA114YS Q21
R83 100 1/8W
D10 1SS184
R107 100 1/8W
C46 0.01
0.1
L11 CFAZ450
R51 4.7K
R50 2.7K
C35 0.01
C36 1/50
C48 0.01
SFR1 33K
C39 0.1/50
C40 3.3/50
AM IF ADJ
LIGHT ON TU ADJ
C105 2P CH
C63 1000P (PP)
R59 100 1/8W
C64 10/50
Q10 DTA114YK
FM MONO
R61 1K
C61 1/50
C62 3.3/50
R62 10K
SFR2 4.7K
VCO ADJ
C75 220/10
R63 220K
C90 1000P (AXIAL)
C66 0.015M
R66 3.3K
R65 3.3K
C65 0.015M
R67 2.2K
R68 2.2K
C70 0.47/50
C69 0.47/50
R71 1K
Q11
C67 1200P
C73 1/50
L15
L.P.F.
COIL 1 POLE MPX×2
L16
C71 3300P
R75 1.8K
R77 3.9K
R73 470K
R69 3.3K
R64 33K
R74 470K
R70 3.3K
Q12
Q11, Q12 2SC2712GR×2 AMP
C74 1/50
C72 3300P
R76 1.8K
R78 3.9K
C68 1200P
R72 1K
REGULATOR
Q22 2SC3266 (GR)
VM
R99 220 1/8W
R96 33
R97 330 1/8W
C88 100/10
R98 3.3K
C89 100/10
D13 HZ6BIL (AXIAL)
L19 2.2UH
5V
C77 0.01
C87 100/10
C78 0.01
C79 0.01
C76 150 CH
PLL
IC3 LC7218
X1 7.2MHz
TC5 30P
XOUT VSS EO EO VDD FM-IN AM-IN FM-L T-BASE AUTO-H MW-L
XIN CE DATA CLK
R82 2.2K 1/8W
R79 10K
R80 10K
R81 10K
C83* 68P
C84 68P
C85 68P
C86 0.01
12.1
11.2
D RELAY C.B
CON803
GND SD T-BASE AUTO CE ST DATA CLK
WH802
R L GND VM VCC
TO B FRONT C.B PIN701
TO C AMP C.B CON101

F VOLUME C.B



VR601
MIC
MIXING

J601
MIC

C607
TO CHASSIS
GND

TO A TUNER C.B
VIA
D RELAY C.B
CON803

GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示はθ表示です。)

B FRONT C.B

LED103, 104
T-BASS
LED101, 102

VR301
BBE

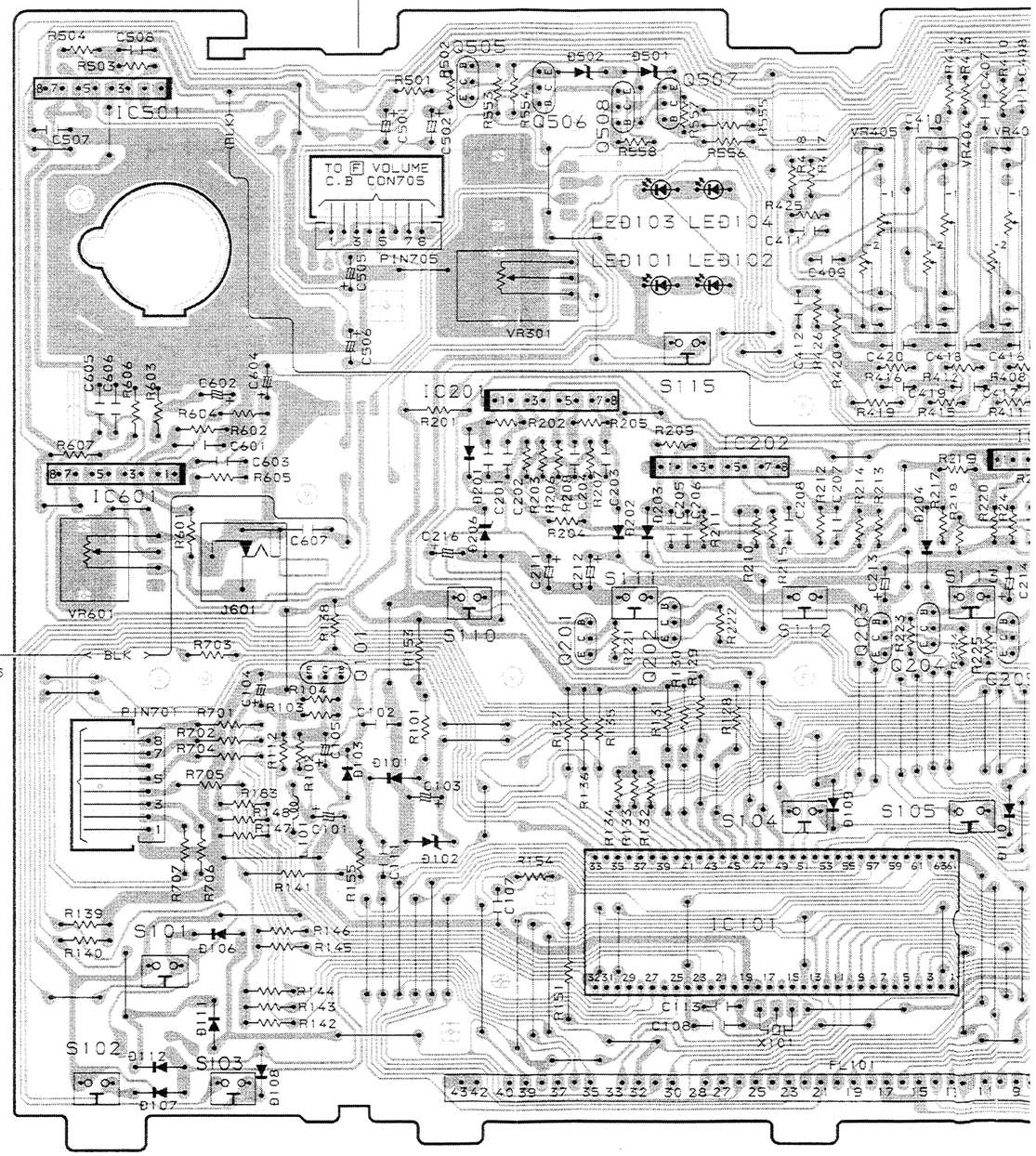
S115
BBE

VR405
10KHZ

VR404
3.5KHZ

VR40
1KH

5BAND GRAPH



S101
BAND

S102
UP

S103
DOWN

TUNING/PRESET
TIMER

S110
CD

S111
VIDEO

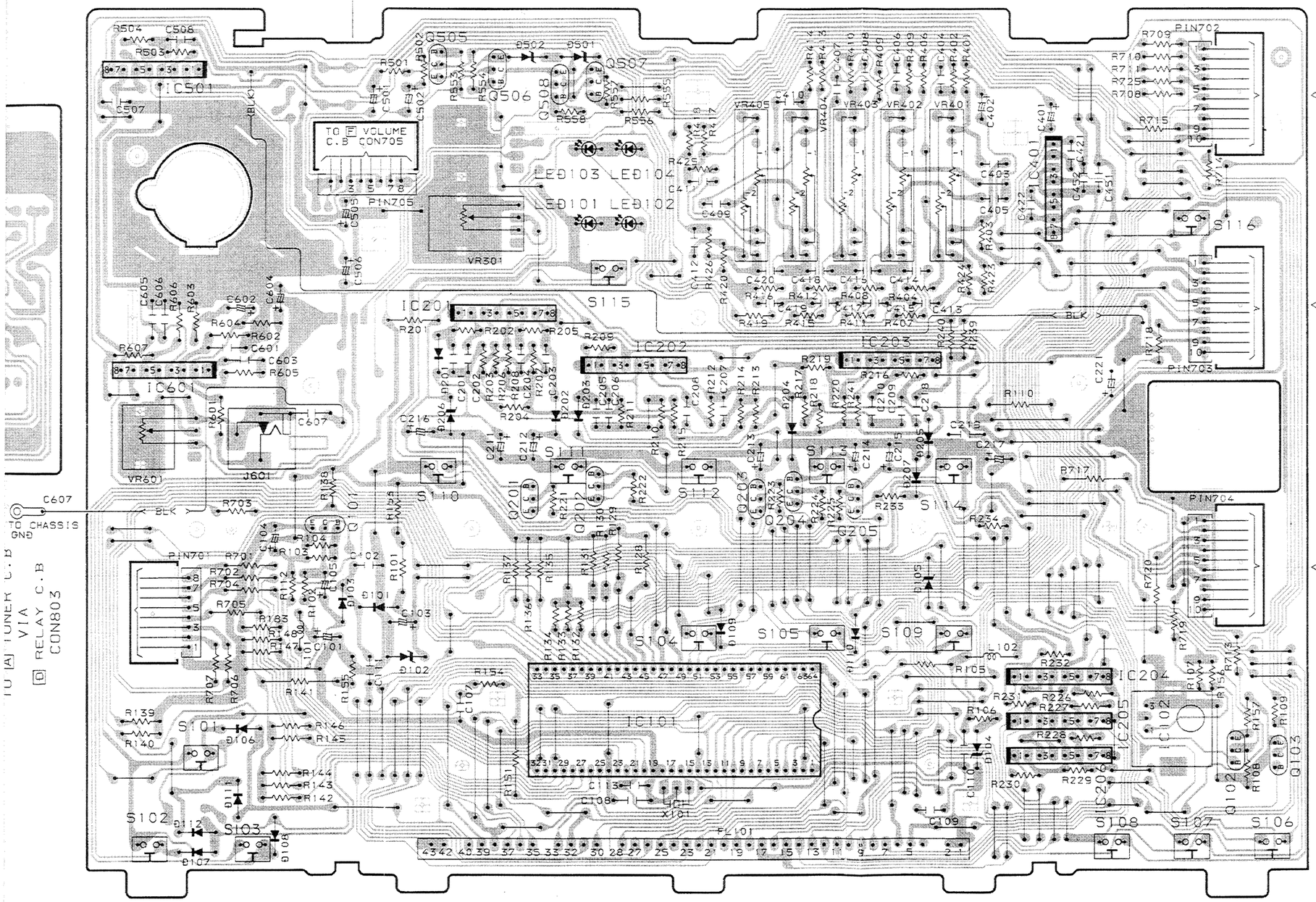
S112
DAT/VIDEO1

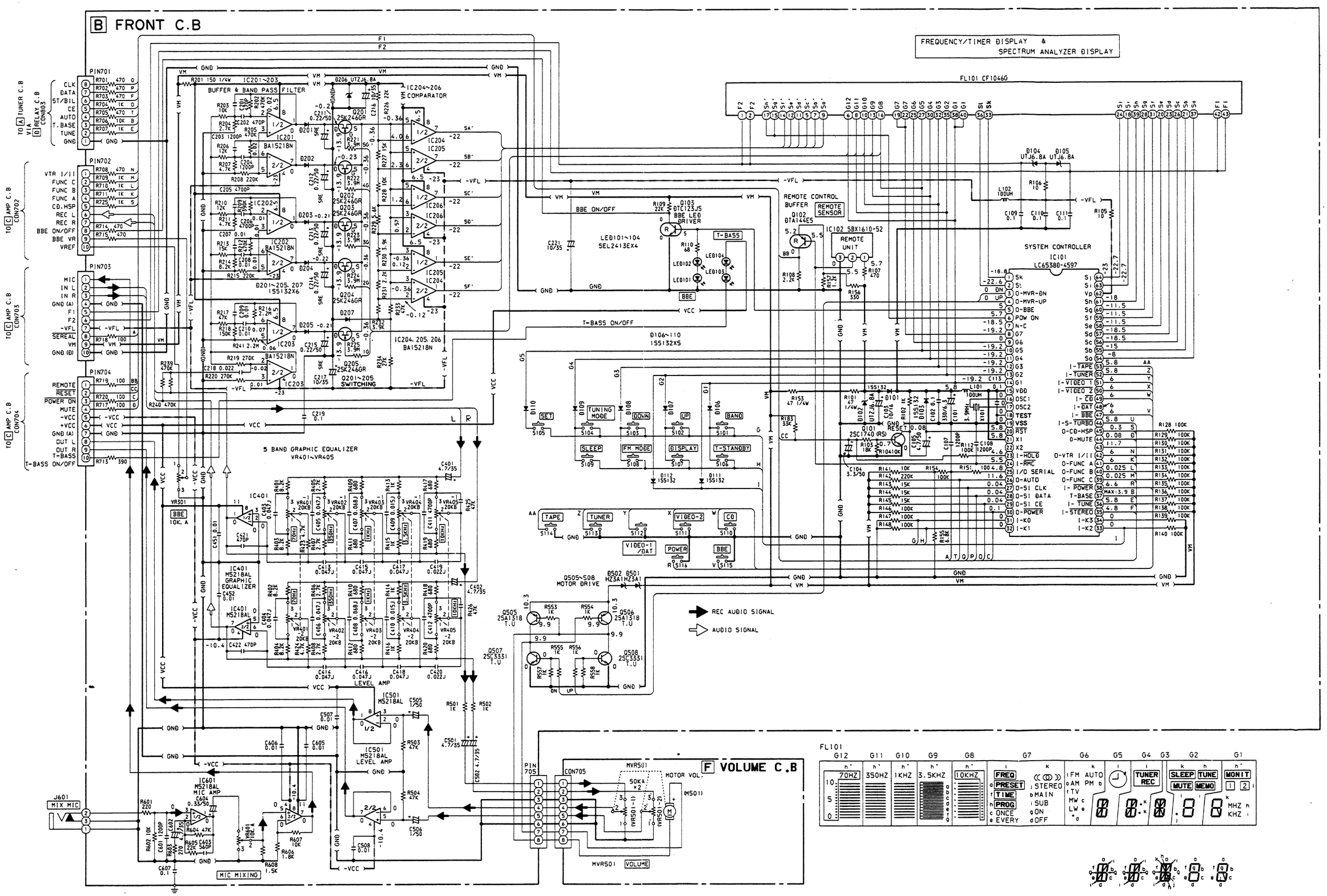
S104
TUNING MODE

S105
SET

FL101 DISPLAY

B FRONT C.B


LED103, 104
T-BASS
LED101, 102
VR301 BBE
S115 BBE
VR405 10KHZ
VR404 3.5KHZ
VR403 1KHZ
VR402 350HZ
VR401 70HZ
5BAND GRAPHIC EQUALIZER
S116 POWER
TO E VOLUME C.B CON705
TO C AMP C.B CON702
TO C AMP C.B CON703
TO C AMP C.B CON704
TO A TUNER VIA D RELAY C.B CON803
TO CHASSIS GND
IC501
IC601
IC201
IC202
IC203
IC204
IC401
IC101
IC102
IC205
VR601
VR301
S101 BAND
S102 UP
S103 DOWN
TUNING/PRESET TIMER
S110 CD
S111 VIDEO
S112 DAT/VIDEO1
S104 TUNING MODE
FL101 DISPLAY
S113 TUNER
S105 SET
S114 TAPE
S109 SLEEP
S108 FM MODE
S107 DISPLAY
S106 T-STANDBY
IC204 REMOTE SENSOR


B FRONT C.B
FREQUENCY/TIMER DISPLAY & SPECTRUM ANALYZER DISPLAY
F VOLUME C.B
5 BAND GRAPHIC EQUALIZER VR401~VR405
REC AUDIO SIGNAL
AUDIO SIGNAL
SYSTEM CONTROLLER IC101 LC65380-4597
REMOTE CONTROL BUFFER
REMOTE SENSOR
IC102 SBX1610-52
REMOTE UNIT
BBE ON/OFF
T-BASS ON/OFF
MOTOR DRIVE
MOTOR VOL.
VOLUME
MIC MIXING
BUFFER & BAND PASS FILTER
IC204~206 COMPARATOR
SWITCHING
LEVEL AMP
MIC AMP
GRAPHIC EQUALIZER
FL101 CF1046G
TO A TUNER C.B VIA B RELAY C.B CON803
TO C AMP C.B CON702
TO C AMP C.B CON703
TO C AMP C.B CON704

C AMP C.B

TO A TUNER C.B
WH802

J202-2 R
DAT/VIDEO-1 IN
J202-1 L
VIDEO-1 IN
J203-2 R
VIDEO-2 IN
J203-1 L
VIDEO-2 IN
J201-2 R
REC OUT
J201-1 L
VIDEO MONITOR OUT
J202
J203
J201
ON
S501
T-BASS
OFF
VR201
DAT/VIDEO 1 INPUT LEVEL

J204
CD DECK
USE ONLY WITH MODEL FD-N5

J206
SURROUND SPEAKERS
IMP: 16Ω+16Ω

J207
SPEAKERS
IMP: 6Ω

E, K ONLY
Z ONLY

TO B FRONT C.B
PW702

TO B FRONT C.B
PIN703

J205
PHONES

TO B FRONT C.B
PIN704

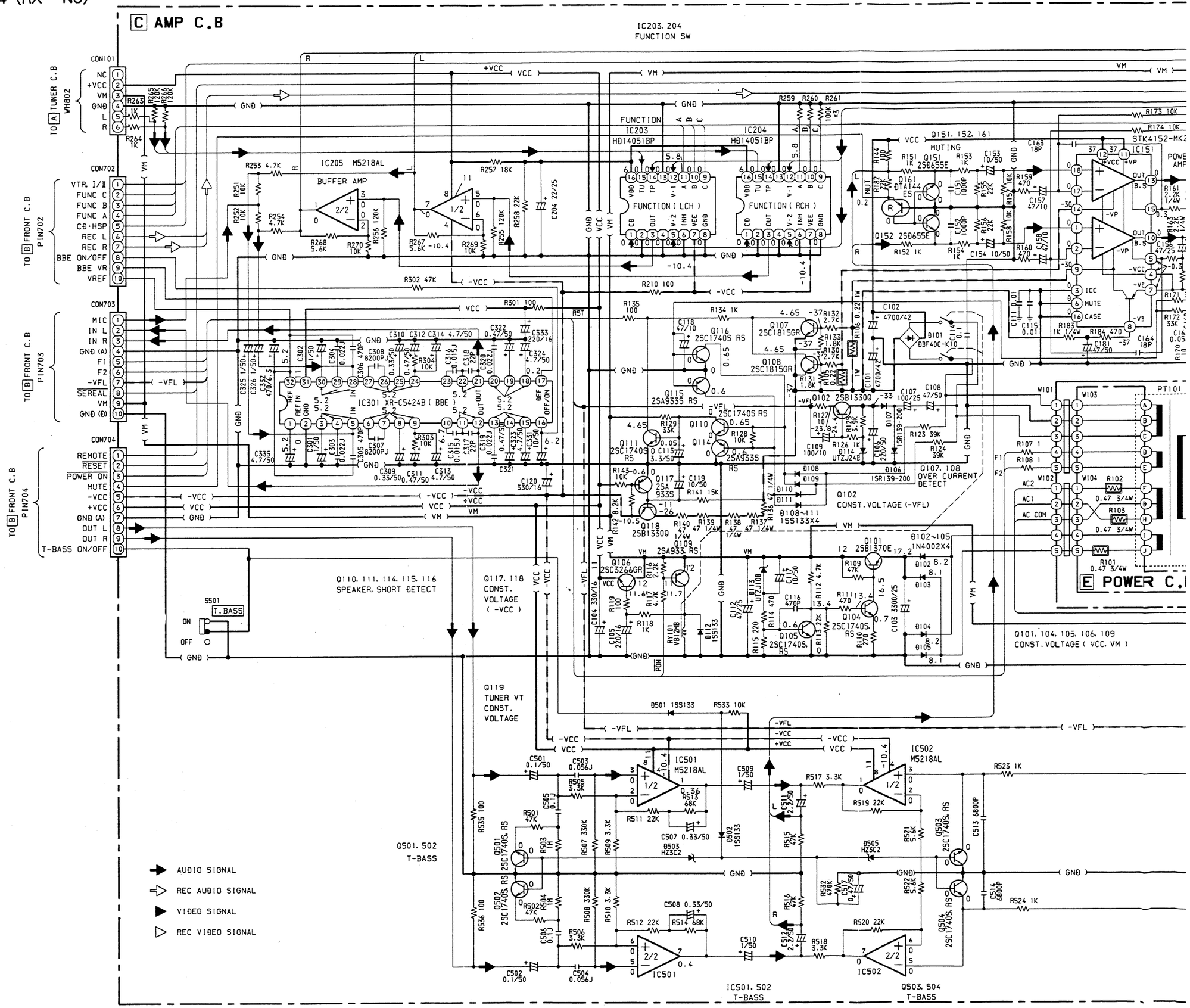
PTI01

E, Z MODELS
AC 220V, 50HZ
, K MODEL
AC 240V, 50HZ

E POWER-2 C.B

GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示は⊖表示です。)


C AMP C.B
IC203. 204
FUNCTION SW
CON101
NC
+VCC
VM
GND
L
R
TO A TUNER C.B
WH802
CON702
VTR. I/II
FUNC C
FUNC B
FUNC A
CD·HSP
REC L
REC R
BBE ON/OFF
BBE VR
VREF
TO B FRONT C.B P1N702
CON703
MIC
IN L
IN R
GND (A)
F1
F2
-VFL
SEREAL
VM
GND (D)
TO B FRONT C.B P1N703
CON704
REMOTE
RESET
POWER ON
MUTE
-VCC
+VCC
GND (A)
OUT L
OUT R
T-BASS ON/OFF
TO B FRONT C.B P1N704
IC205 M5218AL
BUFFER AMP
IC203
HD14051BP
FUNCTION
FUNCTION (LCH)
IC204
HD14051BP
FUNCTION (RCH)
IC301 XR-C5424B (BBE)
Q151. 152. 161
MUTING
2SD655E
DTA144 ES
STK4152-MK2
IC151
POWER AMP
Q116 2SC1740S RS
Q107 2SC1815GR
Q108 2SC1815GR
Q115 2SA933S RS
Q102 2SB1330Q
2SC1740S RS
Q110
Q111 2SC1740S RS
Q114
2SA933S RS
Q109 2SA933S RS
Q106 2SC3266GR
Q117 2SA933S
Q118 2SB1330Q
Q101 2SB1370E
Q104 2SC1740S RS
Q105 2SC1740S RS
Q107. 108 OVER CURRENT DETECT
Q102 CONST. VOLTAGE (-VFL)
Q101. 104. 105. 106. 109 CONST. VOLTAGE (VCC. VM)
Q110. 111. 114. 115. 116 SPEAKER. SHORT DETECT
Q117. 118 CONST. VOLTAGE (-VCC)
Q119 TUNER VT CONST. VOLTAGE
S501 T. BASS
ON
OFF
Q501. 502 T-BASS
IC501 M5218AL
IC502 M5218AL
IC501. 502 T-BASS
Q503. 504 T-BASS
Q501 2SC1740S RS
Q502 2SC1740S RS
Q503 2SC1740S RS
Q504 2SC1740S RS
AUDIO SIGNAL
REC AUDIO SIGNAL
VIDEO SIGNAL
REC VIDEO SIGNAL
E POWER C.

IC203. 204
FUNCTION SW

IC202
VIDEO DRIVE &
GEO PASS SW

Q201
2SD655E
VIDEO I/II
BUFFER

FUNCTION
IC203
HD14051BP

IC204
HD14051BP

FUNCTION (LCH)

FUNCTION (RCH)

Q151. 152. 161
MUTING

Q151
2SD655E

Q161
DTA144
ES

Q152 2SD655E

STK4152-MK2

IC151
POWER
AMP

IC202
TC4053BP

IC201
TC4053BP
VIDEO SW

J201-3 VIDEO
VIDEO MONITOR OUT
J202-3
VIDEO-1 IN
J203-3
VIDEO-2 IN
J201-1 AUDIO
REC OUT
J201-2
J202-1
DAT/
VIDEO-1 IN
J202-2
J203-1
VIDEO-2 IN
J203-2

VR201
DAT/VIDEO-1
INPUT LEVEL

J204
1 CD R
2 CD L
3 CD GND
4 REC R
5 REC L
6 TAPE R
7 TAPE L
8 TAPE GND
9 REMOTE
10 SERIAL
11 D-GND
12 VM
13 AC COM
14 AC 2
15 AC 1

J204 CD DECK
USE ONLY WITH
MODEL FD-N5

Q102
CONST. VOLTAGE (-VFL)

Q107. 108
OVER CURRENT
DETECT

Q101. 104. 105. 106. 109
CONST. VOLTAGE (VCC. VM)

PT101

AC220V. 50HZ
(E. Z ONLY)

AC240V. 50HZ
(K ONLY)

E POWER C.B

IC501
M5218AL

IC502
M5218AL

Q503. 504
T-BASS

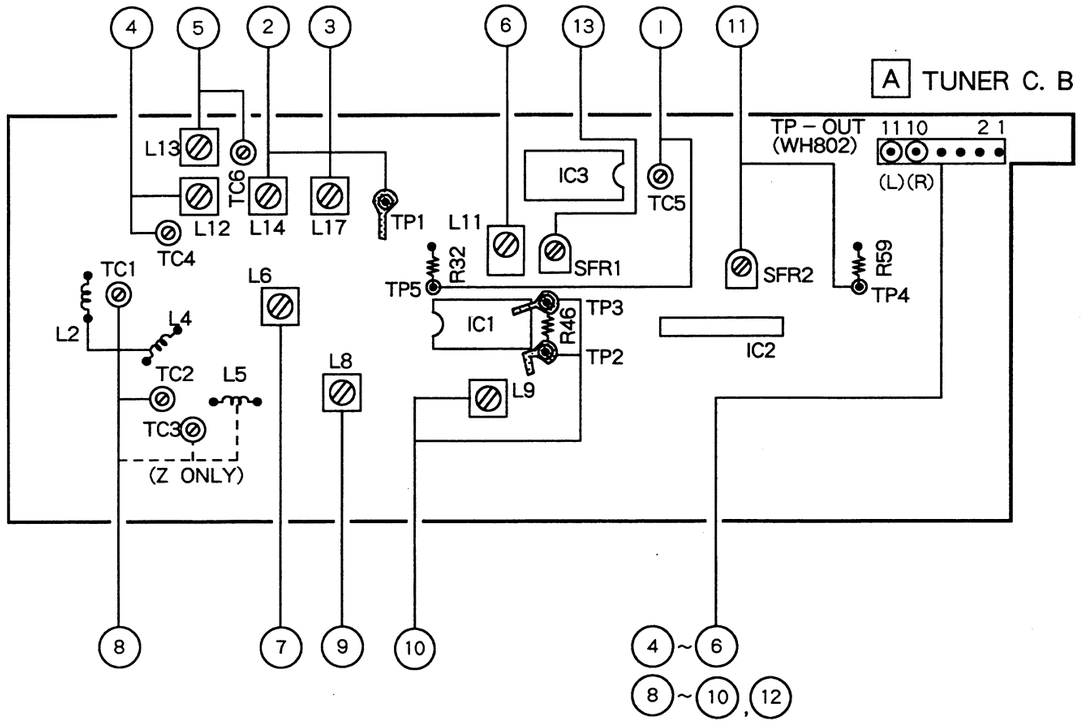
IC501. 502
T-BASS

J205
PHONES

J206
SURROUND
SPEAKERS
SPEAKER
IMP: 16 OHMS
+16 OHMS

J207
SPEAKERS
SPEAKER
IMP: 6 OHMS

ADJUSTMENT (RX – N5)



1. Clock Frequency Adjustment
   Settings : • Test point : TP5
   • Adjustment location : TC5
   Method : Set to MW 1611kHz and adjust so that the test point becomes 2061kHz ± 0.01kHz

2. MW VT Adjustment
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L14
   Method : Set to MW 522kHz and adjust L14 so that the test point becomes 1.0V ± 0.05V

3. LW VT Adjustment
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L17
   Method : Set to LW 144kHz and adjust L17 so that the test point becomes 1.5V ± 0.05V.

4. MW Tracking Adjustment
   Settings : • Test point : TP – OUT (WH802)
   L12 ····· 603kHz
   TC4 ····· 1,404kHz

5. LW Tracking Adjustment
   Settings : • Test point : TP – OUT (WH802)
   L13 ····· 144kHz
   TC6 ····· 290kHz

6. AM IF Adjustment
   Settings : • Test point : TP – OUT (WH802)
   L11 ····· 450kHz

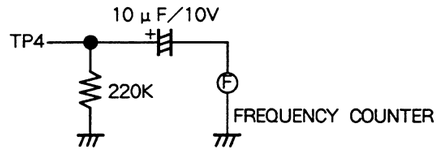
7. FM VT Adjustment
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L6
   Method : Set to FM 108.0MHz and adjust L6 so that the test point becomes 9.0V ± 0.05V.

8. FM Tracking Adjustment
   Settings : • Test point : TP – OUT (WH802)
   L2,4 ····· 87.5MHz (E,K)
   L2,4,5 ····· 87.5MHz (Z)
   TC1,2 ····· 108.0MHz (E,K)
   TC1,2,3 ····· 108.0MHz (Z)

9. FM IF Adjustment
   Settings : • Test point : TP – OUT (WH802)
   L8 ····· 10.7MHz

10. DC Balance Adjustment
    Settings : • Test point : TP2,3
    TP – OUT (WH802) (Distortion)
    • Adjustment location : L9
    Method : Set to FM 98.0MHz and adjust L9 so that TP2 and TP3 output becomes 0V ± 0.02V.
    Next, check so that the distortion becomes less than 0.6 %

11. MPX VCO Adjustment
    Settings : • Test point : TP4
    • MODE SW : STEREO
    • Adjustment location : SFR2
    Method : Connect a capacitor and resitor as below. Set to FM 98.0MHz non modulation and adjust so that the frequency at test point becomes 38kHz ± 0.05kHz.



12. Separation Check
    Settings : • Test point : TP – OUT (WH802)
    Method : Set to FM 98.0MHz and check the separation at TP – OUT becomes more than 27dB.

13. Light on tuning LED Adjustment
    Settings : • Adjustment location : SFR1
    • Input level : 18dB
    Method : Set to FM 98.0MHz and adjust TUNING LED to light on by SFR1. After that, LED goes out by 2dB down.

PRACTICAL SERVICE FIGURE (RX – N5)

< FM SECTION >

Usable Sensitivity : 4 ± 4dB (at 87.5MHz) (E,K)
8 ± 4dB (at 87.5MHz) (Z)
(THD 3 %) 2 ± 4dB (at 98.0/108.0MHz) (E,K)
6 ± 4dB (at 98.0/108.0MHz) (Z)

S/N 50dB Quieting Sensitivity :
Less than 34dB
(at 87.5/98.0/108.0MHz) (E,K)
Less than 38dB
(at 87.5/98.0/108.0MHz) (Z)

Signal to Noise Ratio: (MONO.)
More than 72dB (at 98.0MHz) (E,K)
More than 68dB (at 98.0MHz) (Z)
(STEREO)
More than 65dB (at 98.0MHz) (E,K)
More than 60dB (at 98.0MHz) (Z)

Total Harmonic Distortion:
(MONO.)
Less than 0.8 % (at 98.0MHz)
(STEREO)
Less than 1.5 % (at 98.0MHz)

Stereo Separation: More than 27dB

Intermediate Frequency:
10.7MHz

< MW SECTION >

Sensitivity: 56 ± 4dB (at 603kHz)
(S/N 20dB) 52 ± 4dB (at 999/1404kHz)

Total Harmonic Distortion:
Less than 1.6 % (at 999kHz)

Intermediate Frequency:
450kHz

<LW SECTION>

Sensitivity: 63 ± 5dB (at 153kHz)
(S/N 20dB) 60 ± 5dB (at 198/290kHz)

Total Harmonic Distortion:
Less than 1.2 %

Intermediate Frequency:
450kHz

IC DESCRIPTION (RX – N5)

IC, LC6538D – 4597

Pin No.	Pin Name	I/O	Description
1	Sk	O	FL display segment output. Active "H".
2	SI	O	FL display segment output. Active "H".
3	O – MVR – DN	O	Motor volume up/down outputs.
4	O – MVR – UP	O	
5	O – BBE	O	BBE on/off output. "H" turns BBE on.
6	POW ON	O	Power on/off output. "H" turn the power on.
7	N. C	–	–
8 ~ 14	G7 ~ G1	O	Outputs for the FL display. Active "H" key scan outputs.
15	VDD	–	Power terminal
16	OSC1	–	Pins to generate a clock signal (3.9MHz).
17	OSC2	–	
18	TEST	–	Connected to ground
19	VSS	–	Connected to ground
20	$\overline{RST}$	I	Reset input. "L" when AC power is supplied.
21	X1	–	Crystal oscillator pin. Connected to VDD.
22	X2	–	Crystal oscillator pin. Unused. Open.
23	I – $\overline{HOLD}$	I	Power failure detection input "L" input turns off all output ports and shifts the unit to the HOLD mode (the clock stop and memory hold state). "L" is input when overcurrent is detected in the power amplifier block.
24	I – $\overline{RMC}$	I	Remote control signal input
25	I/O – SERIAL	I/O	DECK/CD sync input/output and auto function input.
26	O – AUTO	O	Outputs "H" when FM stereo is switched to AUTO.
27	O – SI CLK	O	Tuner PLL IC clock output.
28	O – SI DATA	O	Tuner PLL IC data output.
29	O – SI CE	O	Tuner PLL IC chip enable output.
30	O – $\overline{POWER}$	O	Power on/off output. "L" is output when the power is turned on.
31 ~ 34	I – K0 ~ I – K3	I	Key return inputs.
35	I – $\overline{STEREO}$	I	"L" is input when the tuner receives a stereo or bilingual program.
36	I – $\overline{TUNE}$	I	Tuning detection input of the tuner. "L" is input during tuning. "L" is input during auto scanning and performs auto stop and tuning display.
37	T – BASE	I	Clock signal (8kHz) input of the clock. Uses the frequency of the clock signal used in the Tuner PLL (LC7218).
38	I – $\overline{POWER}$	I	Input to turn the power on/off. Active "L".
39	O – FUNC C	O	Amplifier input switching (function) control outputs
40	O – FUNC B	O	
41	O – FUNC A	O	
42	O – VTR I / II	O	VIDEO I / II switching output. Outputs "H" for VIDEO I Outputs "L" for VIDEO II Outputs VIDEO I or II even when the power is turned off.

No	A	B	C	FUNCTION
1	H	L	L	TAPE
2	L	H	L	TUNER
3	H	H	L	VIDEO 1
4	L	L	H	CD
5	H	L	H	VIDEO 2
6	L	H	H	DAT
7	H	H	H	MUTE

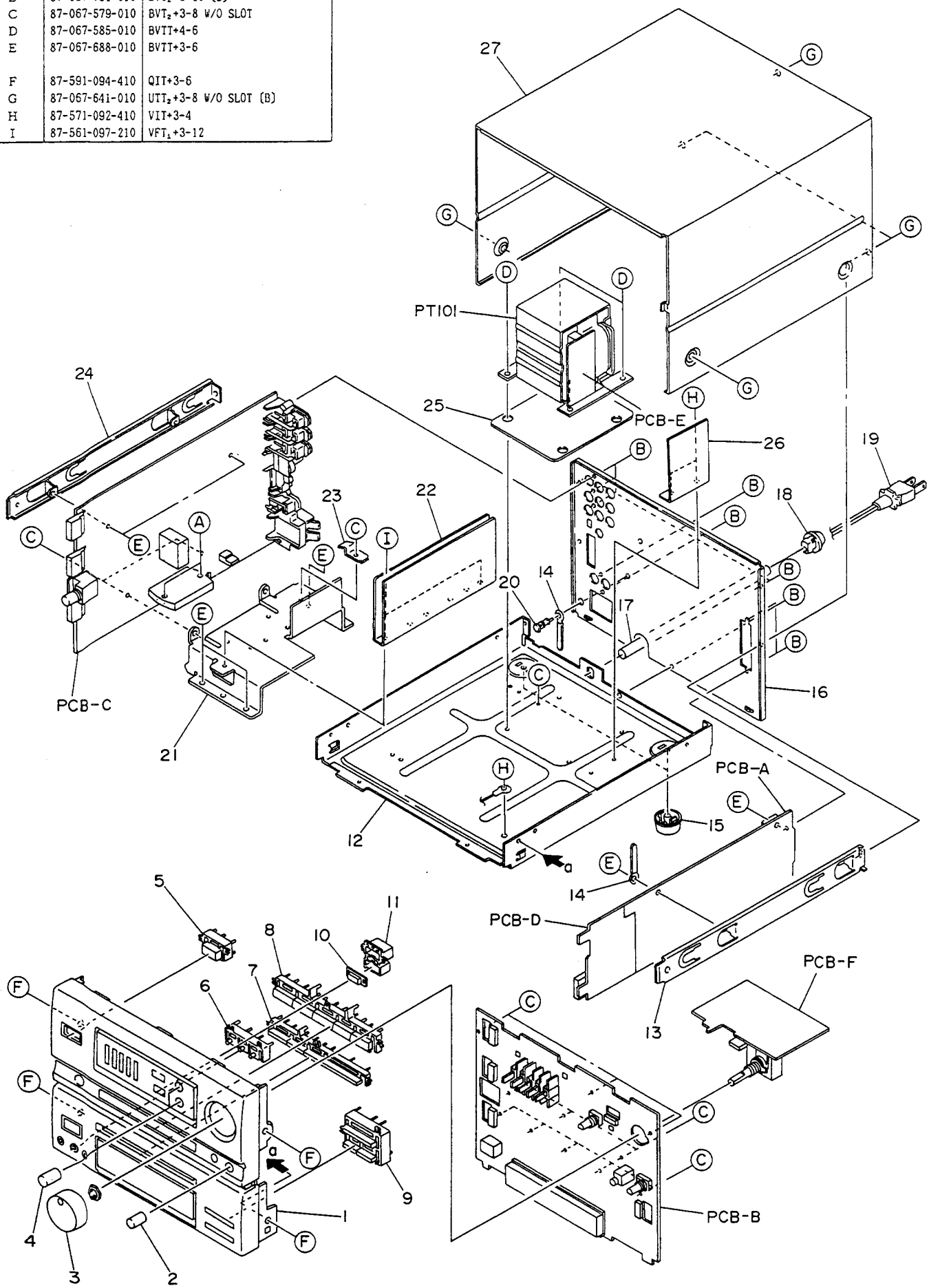
Pin No.	Pin Name	I/O	Description
43	N. C	–	Unused.
44	O – MUTE	O	Muting output. Active "H".
45	O – CD. HSP	O	Outputs "H" for CD double-speed play. Normally set to "L".
46	I – $\overline{\text{S. TURBO}}$	I	Input to turn T – BASS on or off. Active "L"
47	I – $\overline{\text{BBE}}$	I	Input to turn BBE on or off. Active "L".
48	I – $\overline{\text{DAT}}$	–	Unused.
49	I – $\overline{\text{CD}}$	I	Input to specify the CD function. Active "L".
50	I – $\overline{\text{VIDEO 2}}$	I	Input to specify the VIDOE I function. Active "L".
51	I – $\overline{\text{VIDEO 1}}$	I	Input to specify the VIDOE II function. Active "L".
52	I – $\overline{\text{TUNER}}$	I	Input to specify the tuner function. Active "L".
53	I – $\overline{\text{TAPE}}$	I	Input to specify the tape function. Active "L".
54 ≀ 61	Sa ≀ Sh	O	FL display segment outputs. Active "H".
62	Vp	–	FL driver negative power pin
63	Si	O	FL display segment outputs. Active "H".
64	Sj		

IC, LC7218

Pin No.	Pin Name	I/O	Description
1 24	X – IN X – OUT	–	A crystal oscillator (7.2MHz) is connected between these pins.
2 3 4	CE DATA CLK	I	When a key is operated, a signal is transmitted from the CPU (microprocessor). Active "H".
5 ≀ 8	– ≀ –	–	Open.
9	T – BASE	O	Outputs a reference clock signal (8Hz) for the clock.
10 11	–	–	Open.
12	FM AUTO – H	O	Outputs "H" when FM stereo switching is set to AUTO.
13	AM (MW) – L	O	Outputs "H" when an AM (MW) broadcast is received.
14 ≀ 16	– ≀ –	–	Open.
17	FM – L	O	Outputs "L" when an FM broadcast is received.
18	AM IN	I	Receives the AM local oscillator frequency signal.
19	FM IN	I	Receives the FM local oscillator frequency signal.
20	VDD	–	5V power supply pin.
21	E. O.	O	PLL charge pump output.
22	–	–	Open.
23	VSS	–	Connected to GND.

EXPLODED VIEW (RX – N5)

REF.NO.	PART NO.	DESCRIPTION
A	87-067-581-010	BVT_2+3-15 W/O SLOT
B	87-067-761-010	BVT_2+3-10 (B)
C	87-067-579-010	BVT_2+3-8 W/O SLOT
D	87-067-585-010	BVTT+4-6
E	87-067-688-010	BVTT+3-6
F	87-591-094-410	QIT+3-6
G	87-067-641-010	UTT_2+3-8 W/O SLOT (B)
H	87-571-092-410	VIT+3-4
I	87-561-097-210	VFT_1+3-12



MECHANICAL PARTS LIST (RX – N5)

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q, TY
	1	★09-047-641-010	CABINET FRONT ASSY (H)	*	1
	1	★09-047-643-010	CABINET FRONT ASSY (U, C)	*	1
	1	★09-047-642-010	CABINET FRONT ASSY (E, K, Z)	*	1
	2	★80-MT3-014-019	KNOB, MIC	*	1
	3	★80-MT3-012-019	KNOB, VOLUME	*	1
	4	★80-MT3-013-019	KNOB, BBE	*	2
	5	★80-MT3-011-019	KEY, POWER	*	1
	6	★80-MT3-010-019	KEY, MODE	*	1
	7	★80-MT3-009-019	KEY, SLEEP	*	1
	8	★80-MT3-007-019	KEY, FUNCTION	*	1
	9	★80-MT3-008-019	KEY, BAND	*	1
	10	★80-MT3-017-019	INDICATOR, BBE	*	1
	11	★80-MT3-204-019	GUIDE, LED	*	1
	12	---	CHASSIS, MAIN		1
	13	★80-MT3-202-019	HOLDER, PCB	*	1
	14	---	WIRE BINDER		2
	15	★81-675-010-010	FOOT, HIO		2
	16	★80-MT3-003-119	PANEL, REAR (H)	*	1
	16	★80-MT3-026-119	PANEL, REAR (HJ)	*	1
	16	★80-MT3-025-019	PANEL, REAR (U)	*	1
	16	★80-MT3-030-019	PANEL, REAR (C)	*	1
	16	★80-MT3-004-010	PANEL, REAR (E)	*	1
	16	★80-MT3-020-019	PANEL, REAR (K)	*	1
	16	★80-MT3-005-019	PANEL, REAR (Z)	*	1
	17	87-830-812-010	TUBE UL 8 -120 (H, U, C)		1
	17	87-830-820-010	TUBE UL 8 -200 (E, K, Z)		1
	18	★87-085-185-010	BUSHING, AC CORD (H, E, K, Z)		1
	18	★87-085-184-010	BUSHING, AC CORD (HJ)		1
	18	★87-085-189-010	BUSHING, AC CORD (U, C)		1
	19	★82-187-797-019	AC CORD (H)		1
	19	★87-034-749-019	AC CORD (HJ)		1
	19	★87-034-584-019	AC CORD (U, C)		1
	19	★87-034-781-018	AC CORD (E, Z)		1
	19	★87-034-592-018	AC CORD (K)		1
	20	★87-084-077-019	NYLON RIVET DIA 3.5-4.5		1
	21	---	HEAT-SINK, EX		1
	22	---	HEAT-SINK, SUB		1
	23	★89-VP5-206-019	HOLDER, IC		1
	24	★80-MT3-206-019	HOLDER, PCB L	*	1
	25	★80-MT3-207-019	PLATE, SHIELD	*	1
	26	★80-MT3-213-018	PLATE, SHIELD E (E, Z)	*	1
	27	★80-MT3-006-019	CABINET, STEEL (H, U, C)	*	1
	27	★80-MT3-029-018	CABINET, STEEL (E, K, Z)	*	1

MODEL NO.

FD – N5

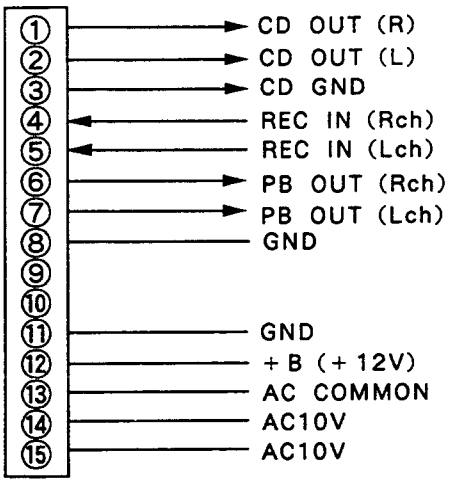
CAUTIONS WHEN SERVICING (FD – N5)

Model FD – N5 does not have a power supply circuit.
Power is supplied to it through a 15 – pin flat cable and the signal inputs/outputs are also performed through this cable.
When servicing the FD – N5 connect it to the RX – N5 so power is supplied to the FD – N5.
If the RX – N5 is not available, follow the procedure below.

[When servicing the unassembled FD – N5]

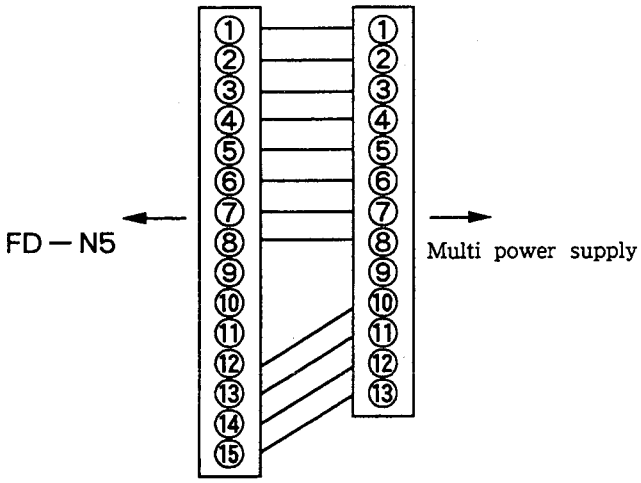
① Supply the following voltages to each terminal from an external power supply.

CON951



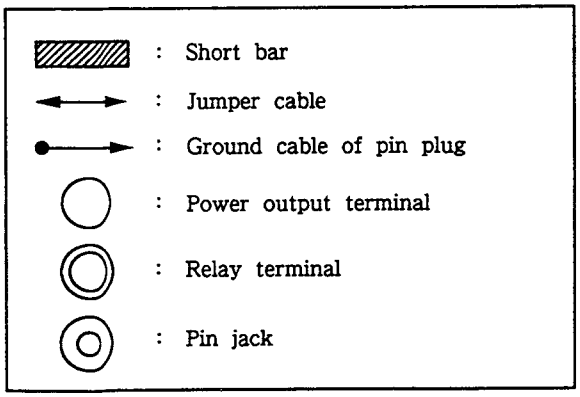
② Connection diagram when using multi power supply (LPS – 9088)

- Connect a multi – conversion harness for the Model FD – N5 to J1.

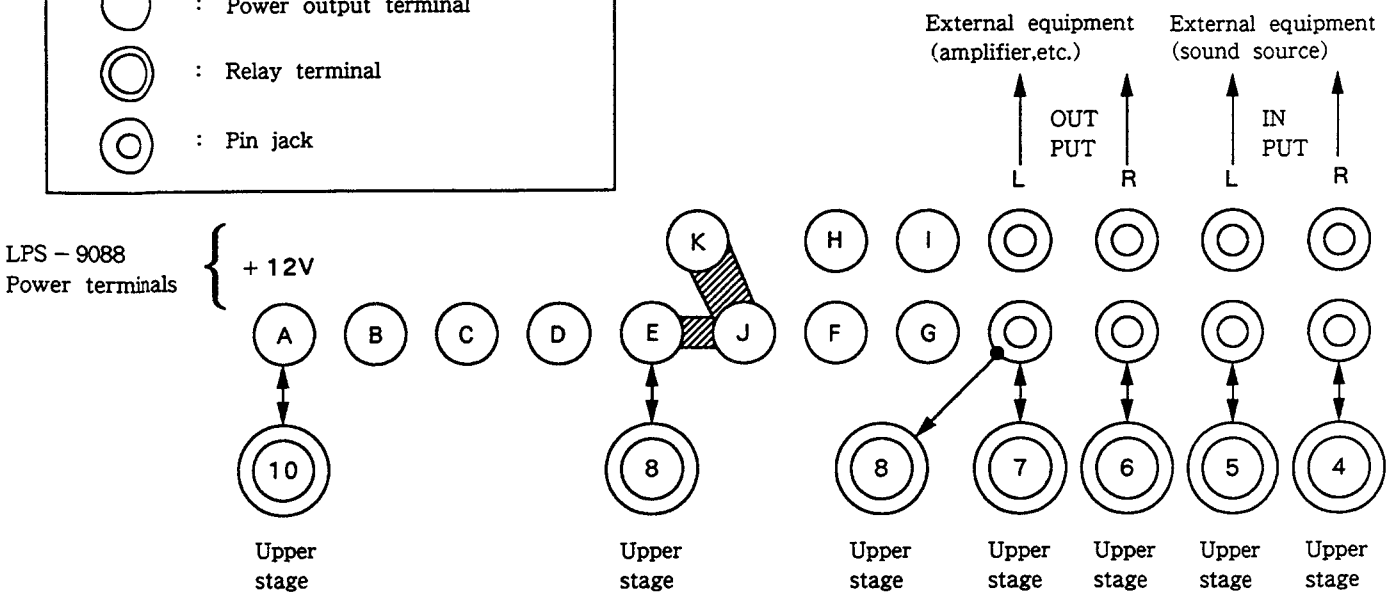


Connect a multi – conversion harness

◎DECK BLOCK REPAIRING

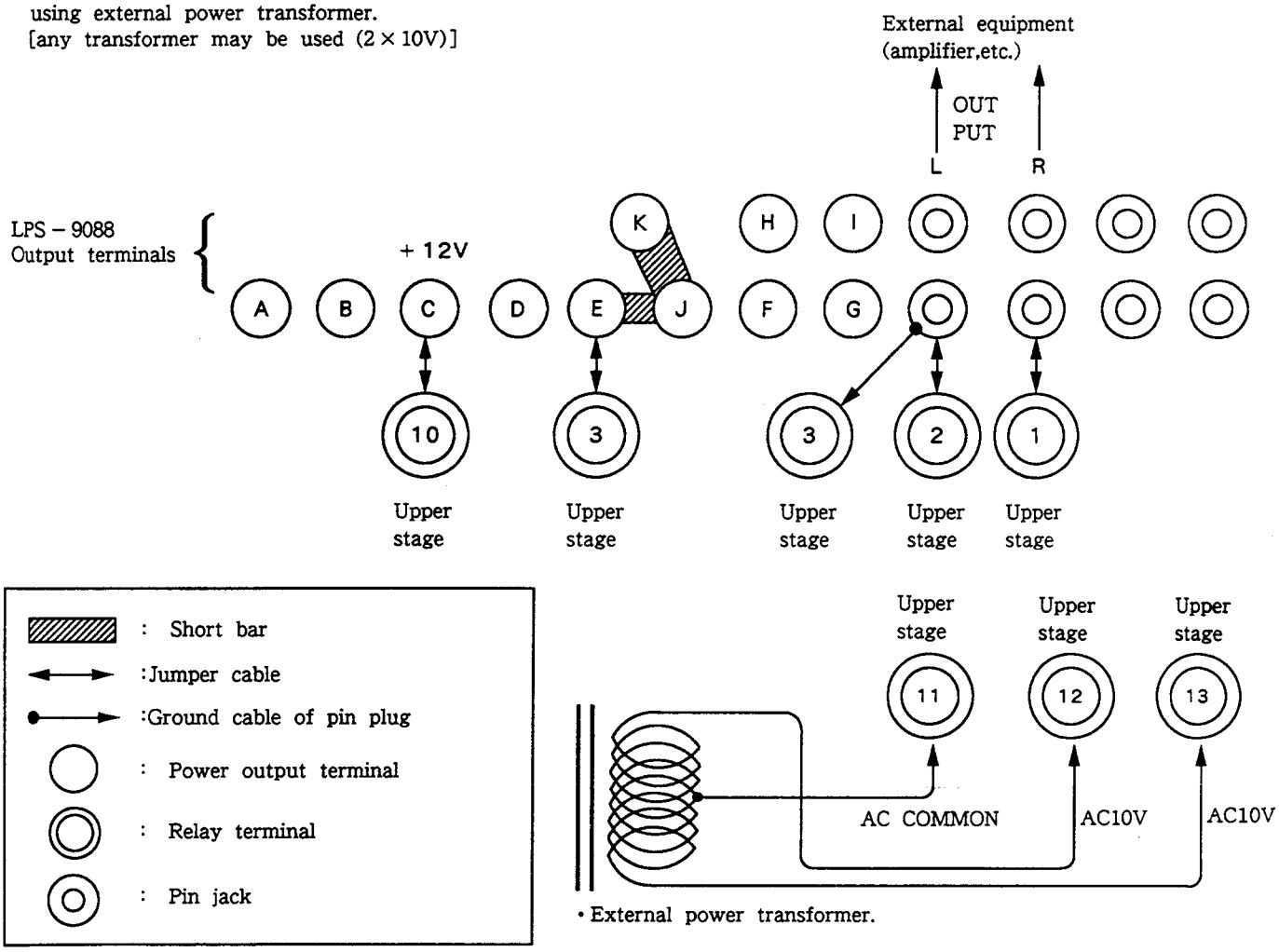


- After connecting the multi – conversion harness, short the anode of diode D809 to ground and then turn the multi power supply on.
(See illustlation on P56)



◎CD BLOCK REPAIRING

Supply AC 10volt to pin 12 and pin 13
using external power transformer.
[any transformer may be used (2 × 10V)]



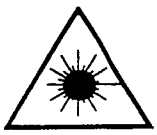
To turn on the CD PLAYER, short the TP10 (POWER ON) and TP4 (GND) for a moment (See illustlation on P52).

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

ADVARSEL!



Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

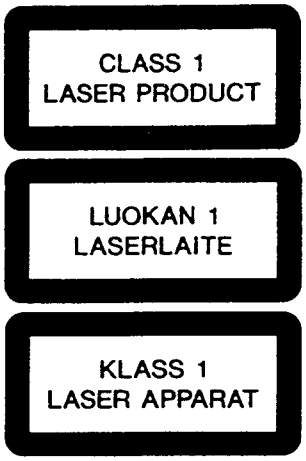
VARO!
Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

VARNING!
Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

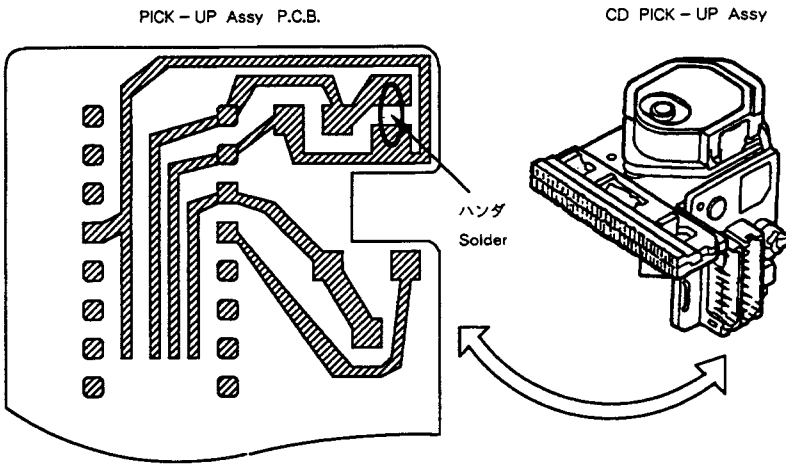
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block (KSS – 210A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in figure below.



ELECTRICAL MAIN PARTS LIST (FD – N5)

REF. NO.	PART NO.	DESCRIPTION
=== IC ===		
	87-001-440-010	IC, BA15218N
	87-002-247-010	IC, BU4052B
	87-002-282-010	IC, BU4066B
	87-001-184-010	IC, CXA1081S
	87-001-400-010	IC, CXA1082S
	87-001-944-010	IC, CXD1167Q
	80-MV3-618-010	IC, CXP50112-199Q
	87-002-211-010	IC, GP1F32T(OPTICAL)
	87-001-874-010	IC, HA12134A
	87-020-840-010	IC, ICPN20
	87-002-215-010	IC, L780S05
	87-002-321-010	IC, L78LR05F
	87-001-173-010	IC, LA6510
	87-001-567-010	IC, LA6520
	87-001-334-010	IC, LB9051A
	80-MV3-617-010	IC, LC6568H-4591
	87-002-306-010	IC, LC7883
	87-027-895-010	IC, M5218AL
	87-020-758-010	IC, NJM2068SD
	87-027-827-010	IC, TC4069UBP
=== TRANSISTOR ===		
	89-503-735-010	FET, 2SK373GR
	87-026-463-010	TRANSISTOR, 2SA933S, SR
	89-109-521-010	TRANSISTOR, 2SA952K
	89-112-964-010	TRANSISTOR, 2SA1296Y
	89-112-965-010	TRANSISTOR, 2SA1296GR
	89-213-702-010	TRANSISTOR, 2SB1370E
	87-026-462-010	TRANSISTOR, 2SC1740S(RS)
	89-318-155-010	TRANSISTOR, 2SC1815GR
	89-320-011-010	TRANSISTOR, 2SC2001K
	89-325-002-010	TRANSISTOR, 2SC2500
	89-406-555-010	TRANSISTOR, 2SD655E
	87-026-500-010	TRANSISTOR, 2SD2144S UV
	87-026-483-010	TRANSISTOR, DTA123JS
	87-026-219-010	TRANSISTOR, DTA144ES
	87-026-218-010	TRANSISTOR, DTC144ES
=== DIODE ===		
	87-027-376-010	DIODE, 1B4B41
	87-001-559-010	DIODE, 1SS131
	87-020-465-010	DIODE, 1SS133
	87-020-110-010	DIODE, 1SS177
	87-020-123-080	DIODE, DS446
	87-027-662-010	DIODE, ZENER HZ22-1L
	87-027-286-010	DIODE, ZENER HZ5C1
	87-027-475-010	DIODE, ZENER HZ6B1
	87-027-332-010	DIODE, ZENER HZ6B1L
	87-001-913-010	DIODE, ZENER UTZJ5.6B
=== MAIN CIRCUIT BOARD SECTION ===		
C101	★87-018-123-010	CAP, CERA-SOL SS 220P-50 B
C102	★87-018-123-010	CAP, CERA-SOL SS 220P-50 B
C103	★87-018-115-010	CAP, CERA-SOL SS 47P-50 SL
C104	★87-018-115-010	CAP, CERA-SOL SS 47P-50 SL
C109	★87-018-121-010	CAP, CERA-SOL SS 150P-50 B
C110	★87-018-121-010	CAP, CERA-SOL SS 150P-50 B
C111	★87-010-404-010	CAP, ELECT 4.7-50 SME
C112	★87-010-404-010	CAP, ELECT 4.7-50 SME
C113	★87-010-404-010	CAP, ELECT 4.7-50 SME
C114	★87-010-404-010	CAP, ELECT 4.7-50 SME
C115	★87-010-101-010	CAP, ELECT 220-16 SME
C201	★87-018-125-010	CAP, CERA-SOL SS 330P-50 B
C202	★87-018-125-010	CAP, CERA-SOL SS 330P-50 B
C203	★87-018-115-010	CAP, CERA-SOL SS 47P-50 SL
C204	★87-018-115-010	CAP, CERA-SOL SS 47P-50 SL
C207	★87-018-123-010	CAP, CERA-SOL SS 220P-50 B
C208	★87-018-123-010	CAP, CERA-SOL SS 220P-50 B
C211	★87-010-404-010	CAP, ELECT 4.7-50 SME
C212	★87-010-404-010	CAP, ELECT 4.7-50 SME
C213	★87-010-101-010	CAP, ELECT 220-16 SME
C251	★87-018-133-010	CAP, CERA-SOL SS 4700P-16 X
C252	★87-018-100-010	CAP, CERA-SOL SS 4.7P-50 SL
C253	★87-018-132-010	CAP, CERA-SOL SS 2200P-16 X
C255	★87-018-121-010	CAP, CERA-SOL SS 150P-50 B
C256	★87-010-374-010	CAP, ELECT 47-10
C257	★87-010-401-010	CAP, ELECT 1-50 SME
C258	★87-018-100-010	CAP, CERA-SOL SS 4.7P-50 SL
C259	★87-018-131-010	CAP, CERA-SOL SS 1000P-50 B
C301	★87-018-119-010	CAP, CERA-SOL SS 100P-50 B
C302	★87-018-119-010	CAP, CERA-SOL SS 100P-50 B
C303	★87-018-198-010	CAP, CERA-SOL SS 2700P-16 X
C304	★87-018-198-010	CAP, CERA-SOL SS 2700P-16 X
C305	★87-010-404-010	CAP, ELECT 4.7-50 SME
C306	★87-010-404-010	CAP, ELECT 4.7-50 SME
C323	★87-018-128-010	CAP, CERA-SOL SS 560P-50 B
C324	★87-018-128-010	CAP, CERA-SOL SS 560P-50 B
C401	★87-018-123-010	CAP, CERA-SOL SS 220P-50 B
C402	★87-018-123-010	CAP, CERA-SOL SS 220P-50 B
C403	★87-014-068-010	CAP, PP 3000P
C409	★87-010-402-010	CAP, ELECT 2.2-50 SME
C410	★87-010-381-010	CAP, ELECT 330-16 SME
C411	★87-010-221-010	CAP, ELECT 470-10
C451	★87-018-131-010	CAP, CERA-SOL SS 1000P-50 B
C453	★87-018-119-010	CAP, CERA-SOL SS 100P-50 B
C454	★87-018-119-010	CAP, CERA-SOL SS 100P-50 B
C501	★87-018-130-010	CAP, CERA-SOL SS 820P-50 B
C502	★87-018-130-010	CAP, CERA-SOL SS 820P-50 B
C503	★87-018-132-010	CAP, CERA-SOL SS 2200P-16 X
C504	★87-018-132-010	CAP, CERA-SOL SS 2200P-16 X
C505	★87-010-404-010	CAP, ELECT 4.7-50 SME
C506	★87-010-404-010	CAP, ELECT 4.7-50 SME
C511	★87-010-545-010	CAP, ELECT 0.22-50 SME
C512	★87-010-545-010	CAP, ELECT 0.22-50 SME
C514	★87-010-404-010	CAP, ELECT 4.7-50 SME
C515	★87-010-404-010	CAP, ELECT 4.7-50 SME
C517	★87-010-371-010	CAP, ELECT 470-6.3
C519	★87-015-688-010	CAP, ELECT 4.7-35 7L
C520	★87-015-688-010	CAP, ELECT 4.7-35 7L
C601	★87-010-404-010	CAP, ELECT 4.7-50 SME
C602	★87-010-381-010	CAP, ELECT 330-16 SME
C603	★87-010-101-010	CAP, ELECT 220-16 SME
C604	★87-010-237-010	CAP, ELECT 1000-16
C801	★87-010-371-010	CAP, ELECT 470-6.3
C851	★87-010-404-010	CAP, ELECT 4.7-50 SME
C951	★87-018-127-010	CAP, CERA-SOL SS 470P-50 B
C952	★87-018-133-010	CAP, CERA-SOL SS 4700P-16 X
C953	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
CF801	★89-MX1-704-010	CERALOCK(MU)3.9MHZ
CON951	★87-064-142-010	CORD, FG15P R(TUNER)
⚠FR701	87-029-019-010	RES, FUSIBLE 2.2-1/2W
L301	★87-005-525-010	COIL, 22MMH-J
L302	★87-005-525-010	COIL, 22MMH-J
L303	★87-003-131-010	COIL, 10MMH J
L304	★87-003-131-010	COIL, 10MMH J
L305	★87-003-123-010	COIL, 2.2MMH J
L306	★87-003-123-010	COIL, 2.2MMH J

REF. NO.	PART NO.	DESCRIPTION
L401	★80-VW1-605-010	COIL, OSC BIAS 108K
L601	★87-003-060-010	COIL, 12UH
R405	★87-025-471-010	RES, NF 4.7-1/4W J
SFR101	★87-024-349-010	SFR, 1K DIA6 H
SFR102	★87-024-349-010	SFR, 1K DIA6 H
SFR201	★87-024-349-010	SFR, 1K DIA6 H
SFR202	★87-024-349-010	SFR, 1K DIA6 H
SFR301	★87-024-353-010	SFR, 10K DIA6 H
SFR302	★87-024-353-010	SFR, 10K DIA6 H
SFR401	★87-024-356-010	SFR, 47K DIA6 H
SFR402	★87-024-356-010	SFR, 47K DIA6 H
=== FRONT CIRCUIT BOARD SECTION ===		
LED911	87-002-353-010	LED, SLR-33MC(REV PLAY)(DECK2)
LED912	87-002-353-010	LED, SLR-33MC(FWD PLAY)(DECK2)
LED913	87-002-354-010	LED, SLR-33DC(PAUSE)(DECK2)
LED914	87-002-355-010	LED, SLR-33VC(REC)(DECK2)
LED915	87-002-353-010	LED, SLR-33MC(FWD PLAY)(DECK1)
LED916	87-002-353-010	LED, SLR-33MC(REV PLAY)(DECK1)
LED917	87-002-353-010	LED, SLR-33MC(DOLBY NR)
LED918	87-002-353-010	LED, SLR-33MC(REV MODE ⮌)
LED919	87-002-353-010	LED, SLR-33MC(REV MODE ⇄)
LED920	87-002-355-010	LED, SLR-33VC(SYNC DUBBING)
LED921	87-002-355-010	LED, SLR-33VC(CD SYNC REC)
SW901	87-036-142-010	TACT SW(OPEN/CLOSE)
SW902	87-036-142-010	TACT SW(F. REW/B. SKIP)
SW903	87-036-142-010	TACT SW(F. FWD/B. SKIP)
SW904	87-036-142-010	TACT SW(REPEAT/BLANK)
SW905	87-036-142-010	TACT SW(RANDOM)
SW906	87-036-142-010	TACT SW(STOP/CLEAR)
SW907	87-036-142-010	TACT SW(PLAY/PAUSE)
SW908	87-036-142-010	TACT SW(PRGM/CHECK)
SW909	87-036-142-010	TACT SW(DISPLAY)
SW910	87-036-142-010	TACT SW(ACTIV EDIT, AUTO/AI)
SW911	87-036-142-010	TACT SW(ACTIV EDIT, PRGM/CONT)
SW921	87-036-142-010	TACT SW(STOP)(DECK2)
SW922	87-036-142-010	TACT SW(CD SYNC REC, NORM)
SW923	87-036-142-010	TACT SW(REW)(DECK2)
SW924	87-036-142-010	TACT SW(CD SYNC REC, HIGH)(H, E, Z)
SW925	87-036-142-010	TACT SW(PLAY)(DECK2)
SW926	87-036-142-010	TACT SW(PAUSE)(DECK2)
SW927	87-036-142-010	TACT SW(FF)(DECK2)
SW928	87-036-142-010	TACT SW(REC)(DECK2)
SW929	87-036-142-010	TACT SW(REVERSE MODE)
SW930	87-036-142-010	TACT SW(STOP)(DECK1)
SW931	87-036-142-010	TACT SW(SYNC DUBBING, NORM)
SW932	87-036-142-010	TACT SW(REW)(DECK1)
SW933	87-036-142-010	TACT SW(SYNC DUBBING, HIGH)
SW934	87-036-142-010	TACT SW(PLAY)(DECK1)
SW935	87-036-142-010	TACT SW(FF)(DECK1)
SW936	87-036-142-010	TACT SW(DOLBY NR)
=== DECK-1 CIRCUIT BOARD SECTION ===		
M1	87-045-320-010	MOTOR SHW2L
SFR1	★87-024-331-010	SFR, 5K
SFR2	★87-024-331-010	SFR, 5K
SOL1	★86-575-622-010	SOLENOID(FR)
SOL2	★86-575-622-010	SOLENOID(PLAY)
SW1	87-036-110-010	PUSH SW(CRO2)
SW2	87-036-110-010	PUSH SW(CST)
SW3	86-575-632-010	LEAF SW(FR)
SW4	87-036-110-010	PUSH SW(PLAY)
=== DECK-2 CIRCUIT BOARD SECTION ===		

REF. NO.	PART NO.	DESCRIPTION
M11	87-045-320-010	MOTOR SHW2L
SFR11	★87-024-331-010	SFR, 5K
SFR12	★87-024-331-010	SFR, 5K
SOL11	★86-575-622-010	SOLENOID(FR)
SOL12	★86-575-622-010	SOLENOID(PLAY)
SW11	87-036-110-010	PUSH SW(MT)
SW12	87-036-110-010	PUSH SW(REB)
SW13	87-036-109-010	PUSH SW(REA)
SW14	87-036-110-010	PUSH SW(CRO2)
SW15	87-036-110-010	PUSH SW(CST)
SW16	86-575-632-010	LEAF SW(FR)
SW17	87-036-110-010	PUSH SW(PLAY)
=== RELAY-1 CIRCUIT BOARD SECTION ===		
=== RELAY-2 CIRCUIT BOARD SECTION ===		
=== CD MAIN CIRCUIT BOARD SECTION ===		
C101	★87-010-124-010	CAP, ELECT 4700-16
C102	★87-010-262-010	CAP, ELECT 3300-16 SME
C103	★87-010-374-010	CAP, ELECT 47-10
C104	★87-010-265-010	CAP, ELECT 33-16 SME
C105	★87-010-265-010	CAP, ELECT 33-16 SME
C106	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C107	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C108	★87-010-374-010	CAP, ELECT 47-10
C109	★87-010-544-010	CAP, ELECT 0.1-50
C110	★87-015-676-010	CAP, ELECT 47-6.3 7L
C111	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C112	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C113	★87-018-214-010	CAP, CERA-SOL SS 0.1-50 F
C201	★87-018-214-010	CAP, CERA-SOL SS 0.1-50 F
C202	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C305	★87-010-384-010	CAP, ELECT 100-25 SME
C306	★87-010-384-010	CAP, ELECT 100-25 SME
C308	★87-010-237-010	CAP, ELECT 1000-16 SME
C315	87-018-214-019	CAP, CERA-SOL SS 0.1-50F(H, U, C)
C401	★87-010-374-010	CAP, ELECT 47-10
C402	★87-018-132-010	CAP, CERA-SOL SS 2200P-16 X
C404	★87-010-374-010	CAP, ELECT 47-10
C405	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C406	★87-010-374-010	CAP, ELECT 47-10
C407	★87-010-374-010	CAP, ELECT 47-10
C408	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C411	★87-010-400-010	CAP, ELECT 0.47-50 SME
C414	★87-018-203-010	CAP, CERA-SOL SS 8200P-16 Y
C417	★87-018-140-010	CAP, CERA-SOL SS 2.2P-50 CH
C450	★87-018-134-010	CAP, CERA-SOL SS0.01-16Y
C451	★87-018-131-010	CAP, CERA-SOL SS1000P-50B
C504	★87-010-404-010	CAP, ELECT 4.7-50 SME
C506	★87-018-123-010	CAP, CERA-SOL SS 220P-50 B
C507	★87-018-123-010	CAP, CERA-SOL SS 220P-50 B
C509	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C510	★87-010-404-010	CAP, ELECT 4.7-50 SME
C511	★87-010-545-010	CAP, ELECT 0.22-50 SME
C512	★87-010-374-010	CAP, ELECT 47-10
C513	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C514	★87-010-374-010	CAP, ELECT 47-10
C515	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C516	★87-018-123-010	CAP, CERA-SOL SS 220P-50 B
C517	★87-010-374-010	CAP, ELECT 47-10
C518	★87-015-695-010	CAP, ELECT 1-50 7L
C519	★87-015-696-010	CAP, ELECT 2.2-50 7L
C521	★87-018-214-010	CAP, CERA-SOL SS 0.1-50 F
C522	★87-018-214-010	CAP, CERA-SOL SS 0.1-50 F

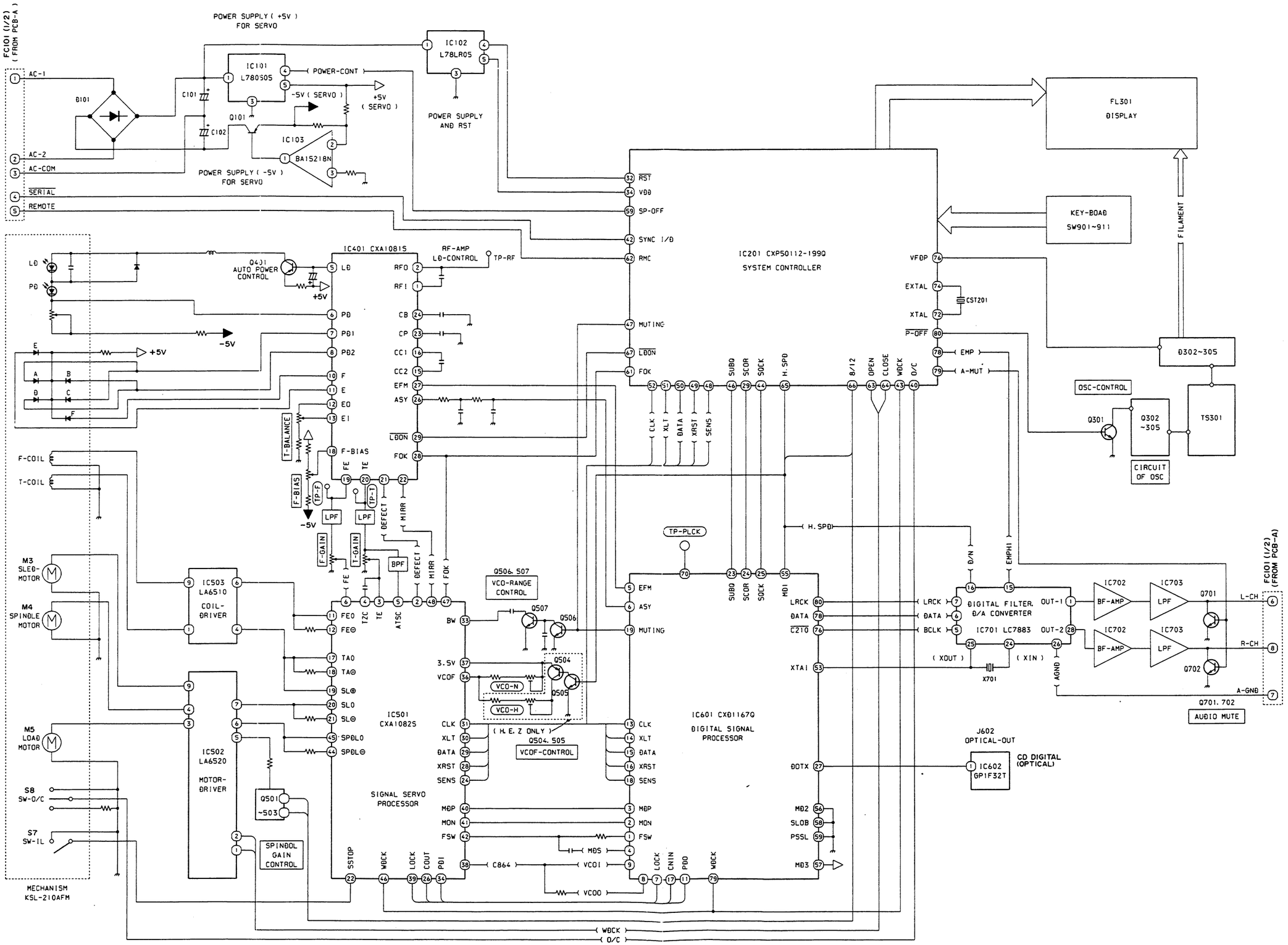
REF. NO.	PART NO.	DESCRIPTION
C523	★87-018-214-010	CAP, CERA-SOL SS 0.1-50 F
C524	★87-010-265-010	CAP, ELECT 33-16 SME
C525	★87-010-265-010	CAP, ELECT 33-16 SME
C526	★87-018-214-010	CAP, CERA-SOL SS 0.1-50 F
C527	★87-018-214-010	CAP, CERA-SOL SS 0.1-50 F
C602	★87-018-131-010	CAP, CERA-SOL SS 1000P-50 B
C604	★87-018-115-010	CAP, CERA-SOL SS 47P-50 SL
C605	★87-018-115-010	CAP, CERA-SOL SS 47P-50 SL
C606	★87-018-115-010	CAP, CERA-SOL SS 47P-50 SL
C607	★87-010-374-010	CAP, ELECT 47-10
C608	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C609	★87-015-694-010	CAP, ELECT 0.47-50
C610	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C611	★87-010-374-010	CAP, ELECT 47-10
C620	★87-018-104-010	CAP, CERA-SOL SS 10P-50 SL
C701	★87-010-374-010	CAP, ELECT 47-10
C702	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C703	★87-018-150-010	CAP, CERA-SOL SS 18P-50 CH
C704	★87-018-150-010	CAP, CERA-SOL SS 18P-50 CH
C705	★87-010-404-010	CAP, ELECT 4.7-50 SME
C706	★87-010-404-010	CAP, ELECT 4.7-50 SME
C711	★87-010-403-010	CAP, ELECT 3.3-50 SME
C712	★87-010-403-010	CAP, ELECT 3.3-50 SME
C713	★87-018-131-010	CAP, CERA-SOL SS 1000P-50 B
C714	★87-018-131-010	CAP, CERA-SOL SS 1000P-50 B
C715	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C716	★87-010-374-010	CAP, ELECT 47-10
C717	★87-018-134-010	CAP, CERA-SOL SS 0.01-16 Y
C718	★87-010-374-010	CAP, ELECT 47-10
C730	★87-018-118-010	CAP, CERA-SOL SS 47P-50SL
CST201	★87-008-394-010	FILTER, CERAMIC CST 4.19MGW
EMI1	★87-008-372-019	FILTR, EMI BL 01RN1
FL301	80-VX1-621-010	FL, 5-BT-125G(DISPLAY)
⚠FR301	87-029-366-010	RES, FUSIBLE 4.7-1/2W F(H, U, C)
⚠FR301	87-029-066-010	RES, FUSIBLE 1.5 1/2W F(E, K, Z)
⚠FR302	87-029-366-010	RES, FUSIBLE 4.7-1/2W F(H, U, C)
⚠FR302	87-029-066-010	RES, FUSIBLE 1.5 1/2W F(E, K, Z)
J201	87-009-413-010	CONN, 4P FG(DAT CONT)
L301	★87-003-136-010	COIL, 100UH
L401	★87-003-147-010	COIL, 22UH
L501	★87-003-147-010	COIL, 22UH
L502	★87-003-147-010	COIL, 22UH
L601	★87-003-136-010	COIL, 100UH
L701	★87-005-135-010	COIL, LA04NA 220UH
L702	★87-003-102-019	COIL, 10UH
L703	★87-003-102-019	COIL, 10UH
R516	★87-025-422-010	RES, MF 3.3K-1/6W F
R517	★87-025-371-010	RES, MF 2.7K-1/6W F(H, E, Z)
R604	★87-025-425-010	RES, MF 12K-1/6W F
R605	★87-025-425-010	RES, MF 12K-1/6W F
SFR401	★87-024-173-010	SFR, 22K DIA6 V
SFR402	★87-024-173-010	SFR, 22K DIA6 V
SFR403	★87-024-173-010	SFR, 22K DIA6 V
SFR404	★87-024-173-010	SFR, 22K DIA6 V
SFR501	★87-024-360-010	SFR, 2.2K(H, E, Z)
SFR502	★87-024-360-010	SFR, 2.2K
TS301	★84-733-626-010	TRANSFORMER, OSC FL
X701	★84-733-617-010	RESONATER, CRYSTAL 16.9344MHZ
=== MOTOR-1 CIRCUIT BOARD SECTION ===		
※PCB-H	91-625-848-110	MOTOR-1 C.B(RF-310T-11400)
※PCB-H	91-628-263-110	MOTOR-1 C.B(MDN-4RA3NTAS/4RA3EA)
※M3	9X-264-077-010	MOTOR GEAR ASSY RF-310T-11400 (SLED)

REF. NO.	PART NO.	DESCRIPTION
※M3	9X-264-134-410	MOTOR GEAR ASSY MDN-4RA3RETA (SLED)
※M4	9X-264-133-710	MOTOR ASSY(W/CHASSIS, T.T) (SPINDLE)
※M4	9X-264-135-810	MOTOR ASSY(W/CHASSIS, T.T) (SPINDLE)
S7	91-572-053-110	LEAF SW(INSIDE LIMIT)
=== MOTOR-2 CIRCUIT BOARD SECTION ===		
M5	9X-246-133-610	MOTOR ASSY(LOADING)
=== MISCELLANEOUS ===		
	98-848-127-310	OPTICAL PICK UP KSS-210A(S)RP
PH1	87-046-355-010	P HEAD(DECK1)
RPEH	87-046-356-010	R.P.E HEAD(DECK2)
S8	91-572-052-110	LEAF SW(OPEN/CLOSE)

※ Caution
Two types of the spindle (DISC) motor and sled motor are used, but they are not compatible.
Check the part numbers (MDN ···, RF ···) on the labels of motors and replace motors with the same one.

BLOCK DIAGRAM – 1 (FD – N5)

(CD SECTION)



G CD MAIN C.B

GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示はθ表示です。)

TO A MAIN C.B PIN952

FC101

PICK UP ASSY

VR1

PIN602

PIN601

CON202

CON401

SW OPEN/CLOSE

CON501

PIN603

M5 LOADING MOTOR

I MOTOR-2 C.B

CHASSIS EARTH

CD MECHA EARTH

H MOTOR-1C.B

(RF-310T-11400)

H MOTOR-1C

(MØN-4RA3NTA/4RA3

M4 SPINDLE MOTOR

S7 INSIDE LIMIT SW

M3 SLED MOTOR

PIN604

CON502

J201 DAT CONT

J602 IC602 CD DIGITAL (OPTICAL)

CON502

PIN502

PIN501

PIN401

PIN402

CON201

CON401

CON501

CON402

TO B FRONT C.B FC901

FL301 DISPLAY

SFR404 TRACKING ERROR ADJ.

SFR403 FOCUS GAIN ADJ.

SFR401 FOCUS BIAS ADJ.

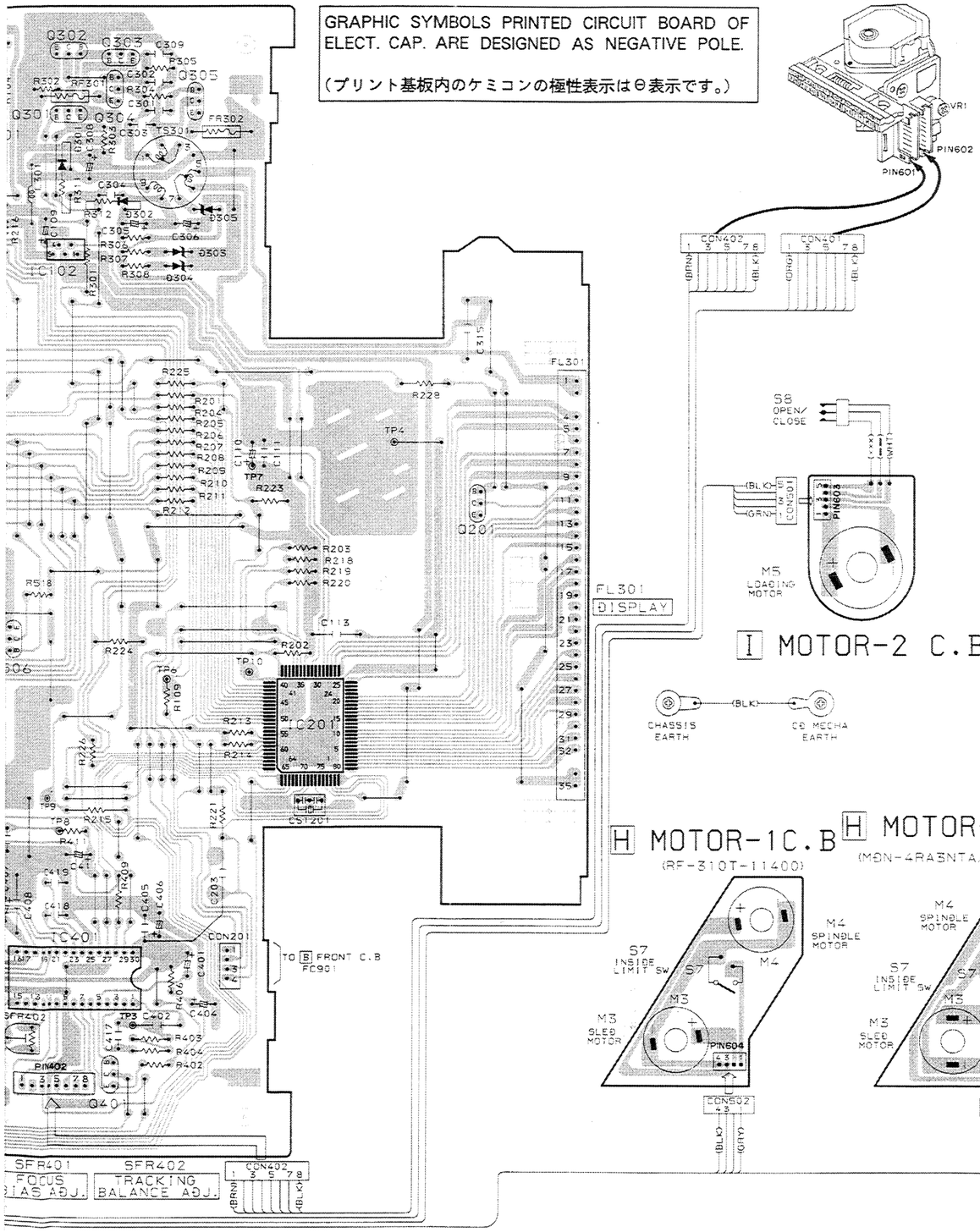
SFR402 TRACKING BALANCE ADJ.

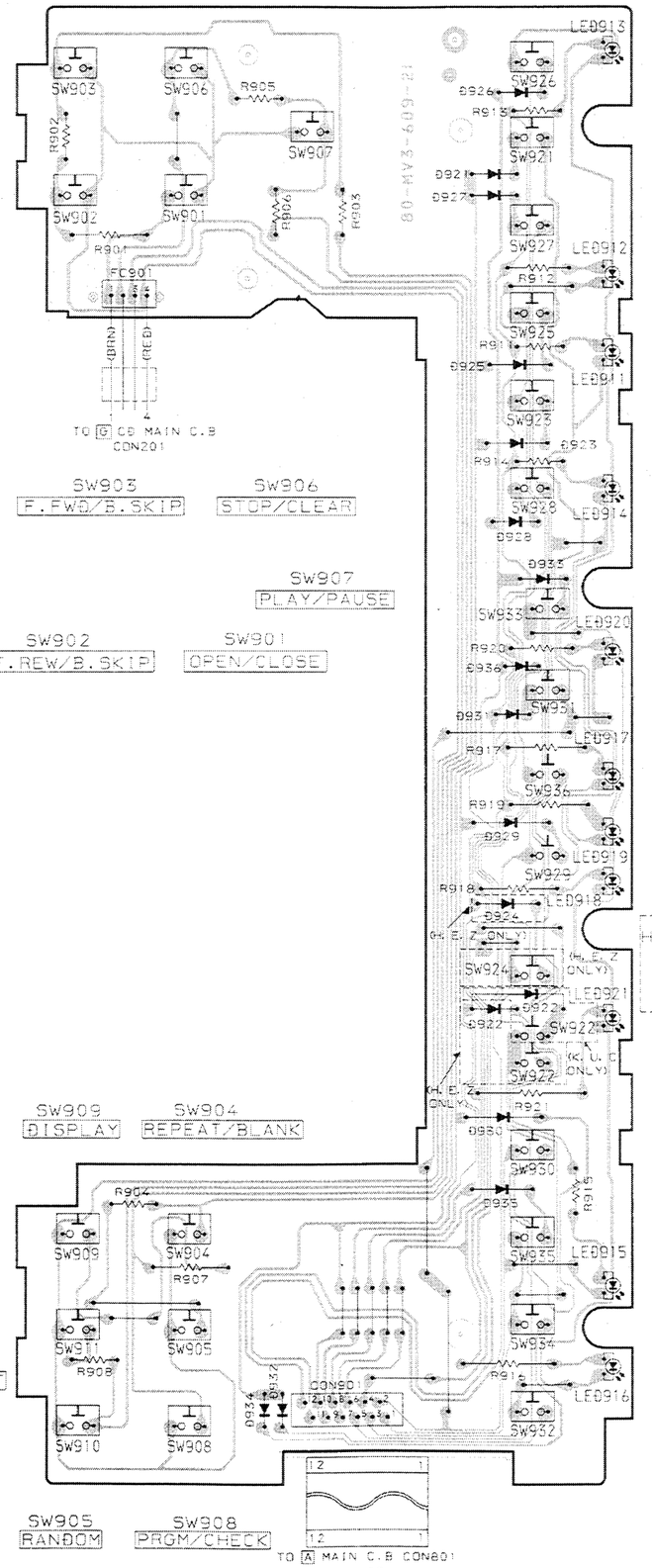
A-SIDE

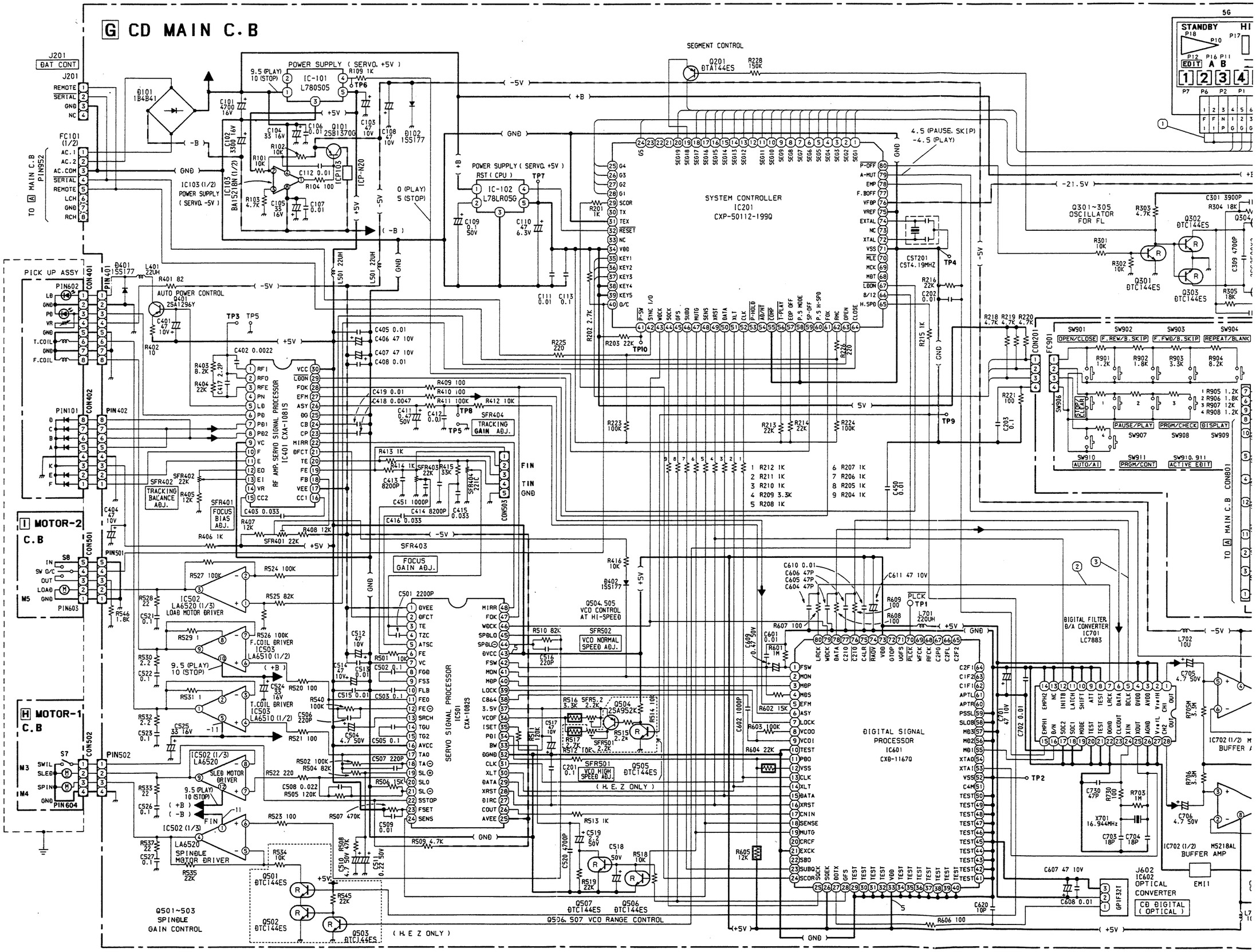
AIWA

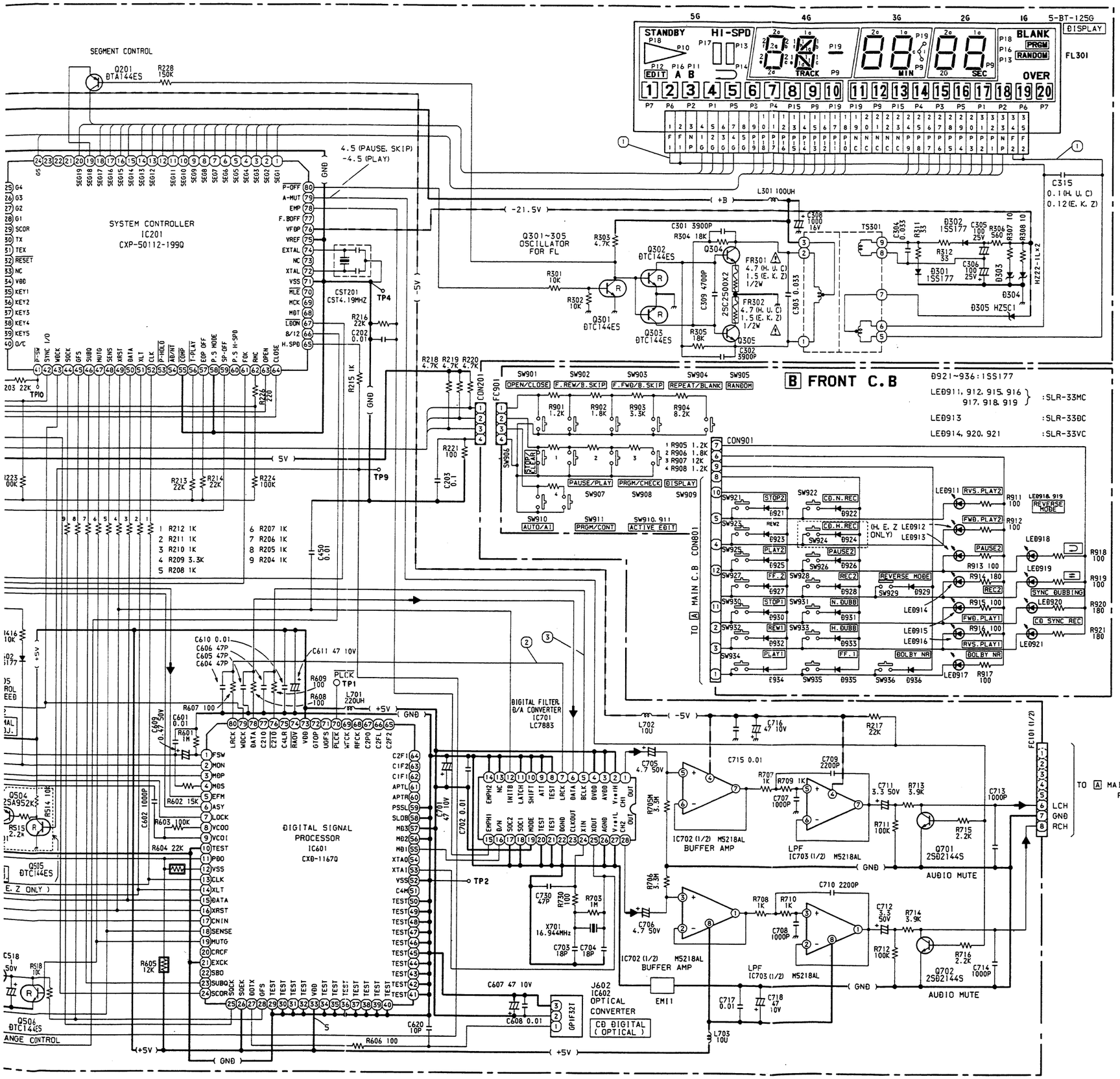
GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

（プリント基板内のケミコンの極性表示はθ表示です。）






G CD MAIN C.B
J201
ÐAT CONT
REMOTE
SERIAL
GNÐ
NC
FC101 (1/2)
AC.1
AC.2
AC.COM
SERIAL
REMOTE
LCH
GNÐ
RCH
TO A MAIN C.B PIN952
POWER SUPPLY (SERVO +5V)
9.5 (PLAY) 10 (STOP)
IC-101 L780505
TP6
POWER SUPPLY (SERVO -5V)
IC103 (1/2) POWER SUPPLY (SERVO -5V)
IC103 BA15218N (1/2)
POWER SUPPLY (SERVO +5V)
RST (CPU)
IC-102 L78LR05G
TP7
SEGMENT CONTROL
Q201 ÐTAT144ES
SYSTEM CONTROLLER
IC201
CXP-50112-199Q
4.5 (PAUSE, SKIP)
-4.5 (PLAY)
0 (PLAY)
5 (STOP)
CST201 CST4.19MHZ
TP4
TP10
PICK UP ASSY
CON401
PIN401
PIN602
LB
GNÐ
PB
VR
T.COIL
F.COIL
AUTO POWER CONTROL
Q401 2SA1296Y
TP3
TP5
CON402
PIN402
PIN101
RF AMP, SERVO SIGNAL PROCESSOR
IC401 CXA-1081S
SFR402 TRACKING BALANCE ADJ.
SFR401 FOCUS BIAS ADJ.
SFR404 TRACKING GAIN ADJ.
SFR403 FOCUS GAIN ADJ.
I MOTOR-2 C.B
CON501
PIN501
S8
M5
H MOTOR-1 C.B
CON502
PIN502
S7
M3
M4
PIN603
PIN604
IC502 LA6520 (1/3) LOAD MOTOR DRIVER
IC502 LA6520 (2/3) SLED MOTOR DRIVER
IC502 LA6520 (1/3) SPINDLE MOTOR DRIVER
IC503 LA6510 (1/2) F.COIL DRIVER
IC503 LA6510 (1/2) T.COIL DRIVER
Q501~503 SPINDLE GAIN CONTROL
SERVO SIGNAL PROCESSOR IC501 CXA-1082S
Q504.505 VCO CONTROL AT HI-SPEED
SFR502 VCO NORMAL SPEED ADJ.
SFR501 VCO HIGH SPEED ADJ.
Q505 ÐTC144ES
(H.E.Z ONLY)
Q506.507 VCO RANGE CONTROL
DIGITAL SIGNAL PROCESSOR IC601 CXB-1167Q
BIGITAL FILTER, D/A CONVERTER IC701 LC7883
IC702 (1/2) BUFFER AMP
M5218AL
J602 IC602 OPTICAL CONVERTER
CD DIGITAL (OPTICAL)
Q301~305 OSCILLATOR FOR FL
Q302 ÐTC144ES
Q301 ÐTC144ES
Q303 ÐTC144ES
CON201
SW901 OPEN/CLOSE
SW902 F.REW/B.SKIP
SW903 F.FWD/B.SKIP
SW904 REPEAT/BLANK
SW906
SW907 PAUSE/PLAY
SW908 PRGM/CHECK
SW909 DISPLAY
SW910 AUTO/AI
SW911 PRGM/CONT
SW910.911 ACTIVE EDIT
STANDBY
EDIT
TO A MAIN C.B CON801



1 FILAMENT VOLTAGE
VOLT/DIV : 5V
TIME/DIV : 10US
0
-17V
4V

2 LRCK
VOLT/DIV : 2V
TIME/DIV : 5US
5V

NORMAL PLAY : 44.1KHZ
HISPEED PLAY : 88.2KHZ

3 BCLK
VOLT/DIV : 2V
TIME/DIV : 0.2US
5V

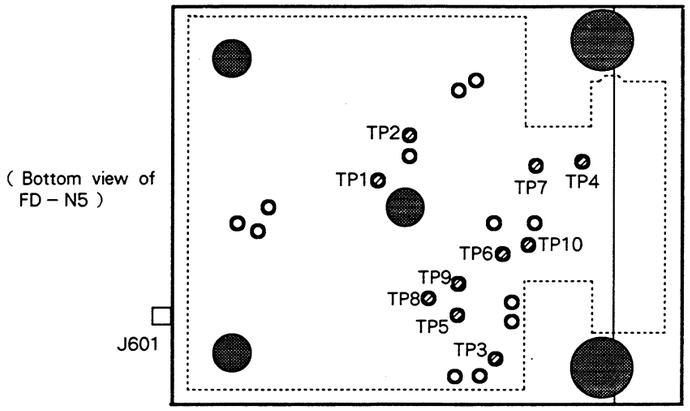
NORMAL PLAY : 2.1168MHZ
HISPEED PLAY : 4.2336MHZ

ADJUSTMENT – 1 (FD – N5)

(CD SECTION)

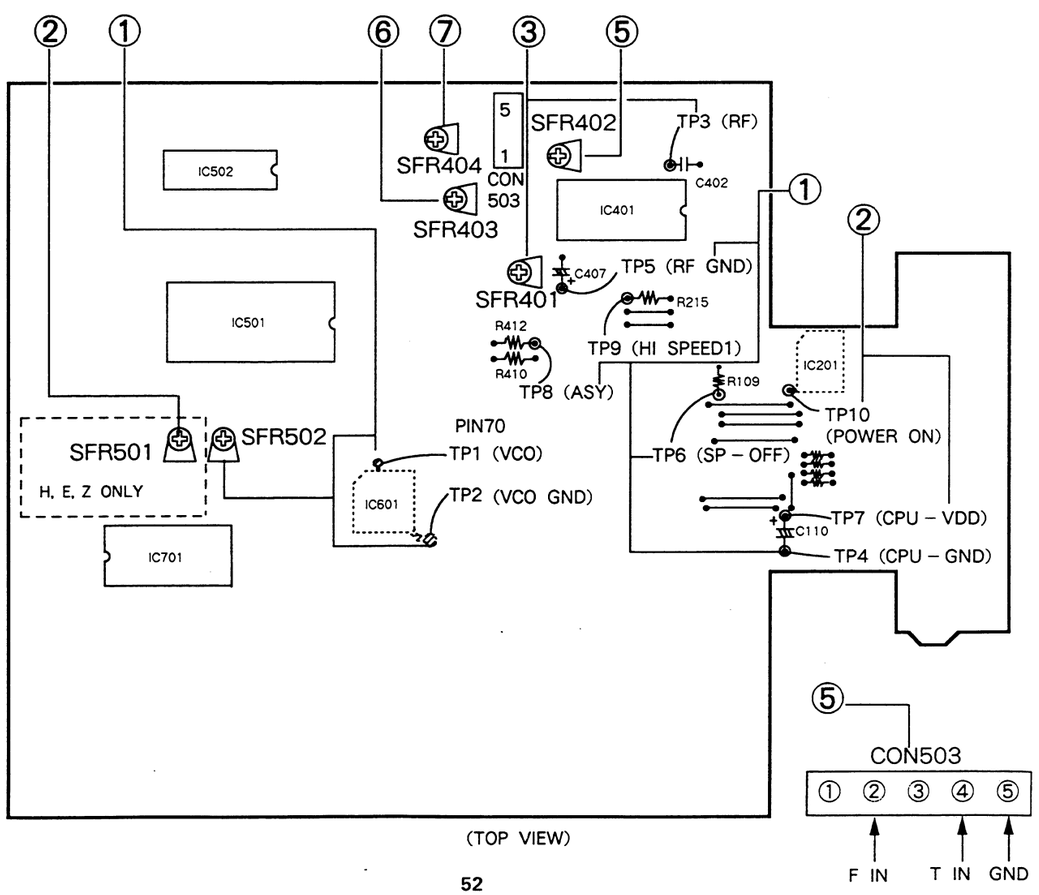
Before performing adjustments in the CD section, disconnect connectors CON101 and CON201 from the head and stand the MAIN C.B on the recess (at a point where 1/3 of the back of the left/right supports of MAIN C.B) of the C.B holder.

The bottom of FD – N5 has holes corresponding to the test points of the CD MAIN C.B.



(Fig – 1)

G CD MAIN C.B

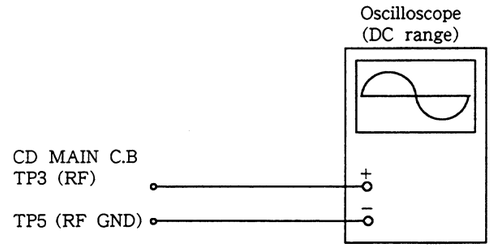


Note : Connect a probe (10 : 1) of the frequency counter or the osilloscope to a test point.

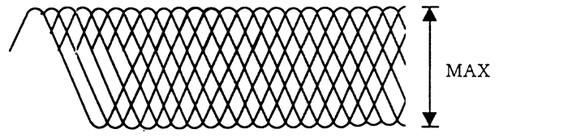
1. Normal Speed VCO Frequency Adjustment
   (1) Press the OPEN/CLOSE button of the unit to open the tray.
   (2) Connect a frequency counter to test points TP1 (VCO) and TP2 (VCO GND).
   (3) Connect TP6 (SP – OFF) to TP4 (CPU – GND).
   (4) Connect TP9 (HI SPEED1) to TP4 (CPU – GND).
   (5) Connect TP5 (RF GND) to TP8 (ASY).
   (6) Adjust SFR502 so that the frequency counter reading is 4.40 ± 0.01 MHz.
   (7) After the adjustment is completed, disconnect the ground lead wire.

2. High Speed VCO Frequency Adjustment (H,E,Z ONLY)
   (1) Press the OPEN/CLOSE button of the unit to open the tray.
   (2) Connect a frequency counter to test points TP1 (VCO) and TP2 (VCO GND).
   (3) Connect TP6 (SP – OFF) to TP4 (CPU – GND).
   (4) Connect TP9 (HI SPEED1) to TP7 (CPU – VDD).
   (5) Connect TP5 (RF GND) to TP8 (ASY).
   (6) Adjust SFR501 so that the frequency counte reading is 9.60 ± 0.01 MHz.
   (7) After the adjustment is completed, disconnect the ground lead wire.

3. Focus Bias Adjustment
   Make the focus bias adjustment when replacing and repairing the optical block.



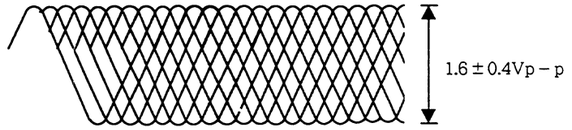
(1) Connect an oscilloscope to test points TP3 (RF) and TP5 (RF GND).
(2) Connect TP6 (SP – OFF) to TP4 (CPU – GND).
(3) Insert test disc YEDS-18 (YEDS-1) and play back the second composition.
(4) Adjust SFR401 (F.B) so that the amplitude of waveform on the oscilloscope is maximized.
(5) After adjustment is completed, disconnect the ground lead wire.



VOLT/DIV : 50mV
TIME/DIV : 0.5 μ S

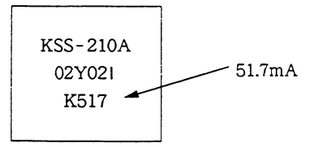
4. RF Waveform Check
   Make the RF waveform check when replacing and repairing the optical block.

   (1) Connect an oscilloscope to test points TP3 (RF) and TP5 (RF GND).
   (2) Connect TP6 (SP – OFF) to TP4 (CPU – GND).
   (3) Insert test disc YEDS-18 (YEDS-1) and play back the second composition.
   (4) Check that the waveform on the oscilloscope is as shown in the figure below.
   (5) After checking is completed,disconnect the ground lead wire.



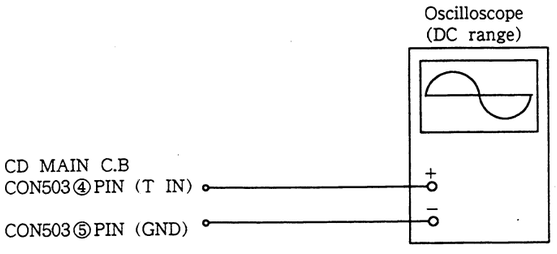
VOLT/DIV : 50mV
TIME/DIV : 0.5 μ S

Note : The current of the laser signal can be checked with the voltages on both sides of R402 (10 Ω). The difference for the specified value shown on the label must be within ± 6.0 mA.

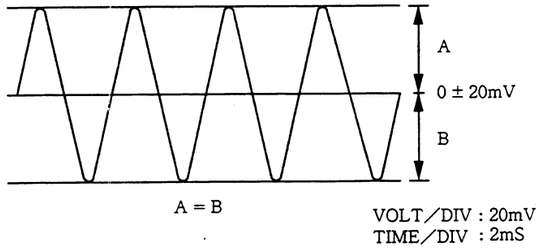


Laser current Iop = $\frac{\text{Voltage across R402}}{10\ \Omega}$

5. Tracking Balance Adjustment



(1) Connect an oscilloscope to test points CON503④PIN (T IN) and CON503⑤PIN (GND).
(2) Connect a center of SFR404 (TG) on the main board to GND.
(3) Connect TP6 (SP − OFF) to TP4 (CPU − GND).
(4) Insert test disc YEDS-18 (YEDS-1) and press the PLAY button.
(5) Adjust SFR402 (TB) so that the waveform on the oscilloscope is vertically symmetrical as shown in the figure below.
(6) After the adjustment is completed, disconnect the ground lead wire.



6,7.Focus/Tracking Gain Adjustment

A servo analyzer is necessary in order to perform this adjustment exactly. However, this gain has a margin,so even if it is slightly off, there is no problem. Therfore, do not perform this adjustment. Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechinical shock when 2-axis device operates. However, as these gains are reciprocated, the adjustment is performed so that both gains are satisfied.

- When gain is raised, the noise increases when the 2-axis device opearates.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.

When the gain adjustment is not satisfied, the symptoms below appear.

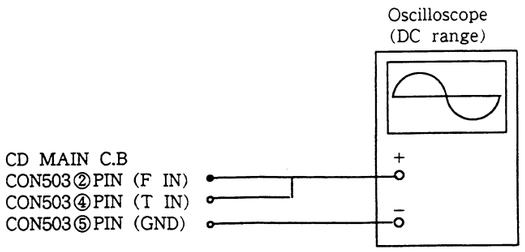
Symptoms \ Gain	(Focus)	Tracking
● The time until music starts becomes longer for STOP→▶ PLAY or automatic selection (⏮, ⏭ buttons pressed.) (Normally takes about 2 seconds.)	low	low or high
● Music does not start and disc continues to rotate for STOP →▶PLAY or automatic selection (⏮, ⏭ buttons pressed.)	−	low
● Disc stops to rotate shortly after STOP→▶PLAY.	low or high	−
● Sound is interrupted during PLAY. Or time counter display stops.	−	low
● More noises during the 2-axis device operation.	high	high

The following is simple adjustment method.

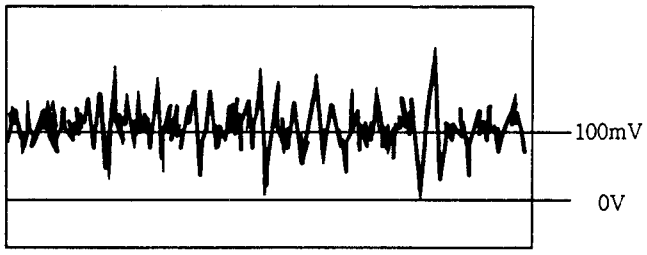
− Simple adjustment −

Note : Since the adjustment cannot be performed exactly, remember the positions of the controls before the adjustment and compare the adjusted position and the original position.
If the difference is a little, return the control to the original position.

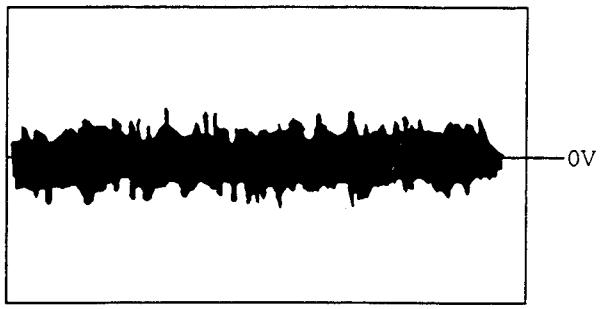
Procedure :



(1) Keep the set horizontal. (If the set is not kept horizontally, this adjustment cannot be performed due to the gravity against the 2-axis device.)
(2) Insert test disc YEDS-18 (YEDS-1) and play back the second composition.
(3) Connect an oscilloscope to CON503②PIN (F IN) and pin⑤ (GND).
(4) Adjust SFR403 (FG) so that the waveform appears as shown in the figure below.(focus gain adjustment)

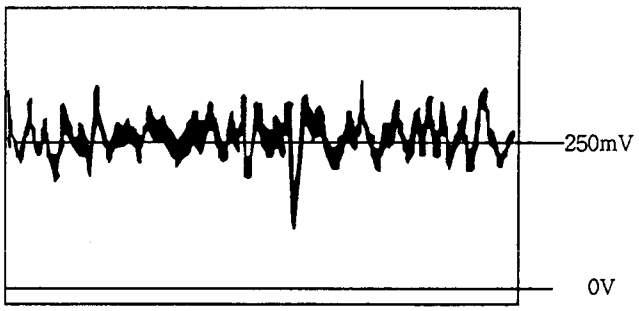


VOLT/DIV : 10mV
TIME/DIV : 2mS



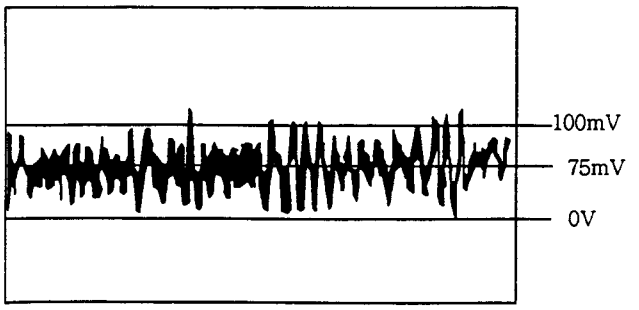
VOLT/DIV : 50mV
TIME/DIV : 2mS

● Incorrect example (DC level changes more than on adjusted waveform)



VOLT/DIV : 10mV
TIME/DIV : 2mS

Low focus gain



VOLT/DIV : 10mV
TIME/DIV : 2mS

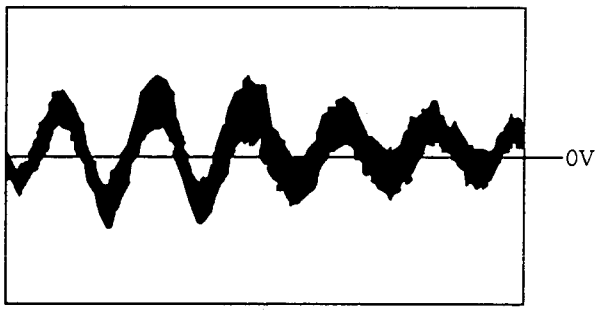
High focus gain

(5) Connect an oscilloscope to CON503④PIN (T IN) of the main board.

(6) Adjust SFR404 (TG) so that the waveform appears as shown in the figure below.
(tracking gain adjustment)

● Incorrect example (The fundamental wave appears as compared with the waveform adjusted.)

Low tracking gain



VOLT/DIV : 50mV
TIME/DIV : 2mS

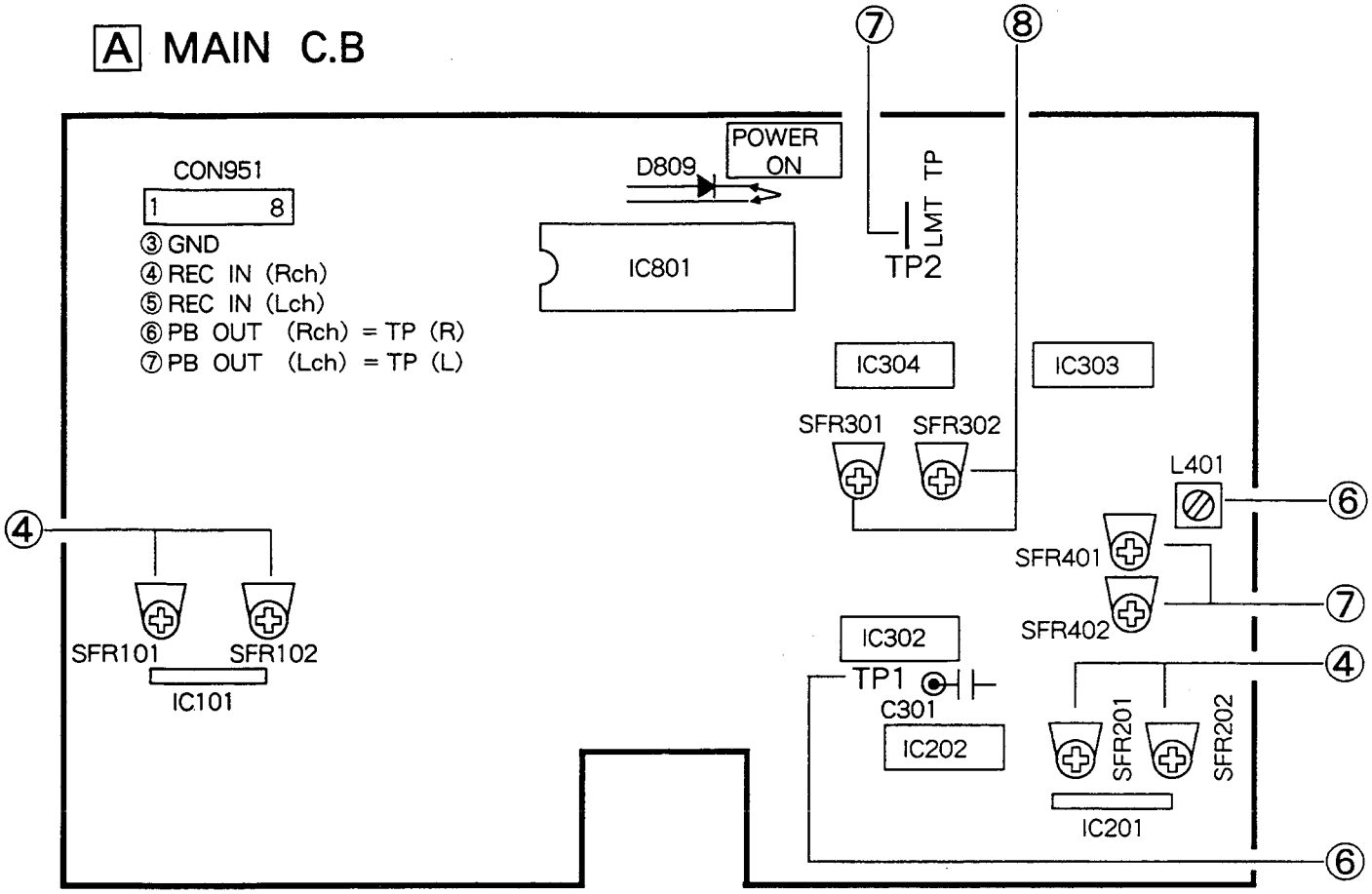
High tracking gain
(The frequency of the fundamental wave is higher than that in low gain.)

VOLT/DIV : 50mV
TIME/DIV : 2mS

ADJUSTMENT – 2 (FD – N5)

(DECK SECTION)

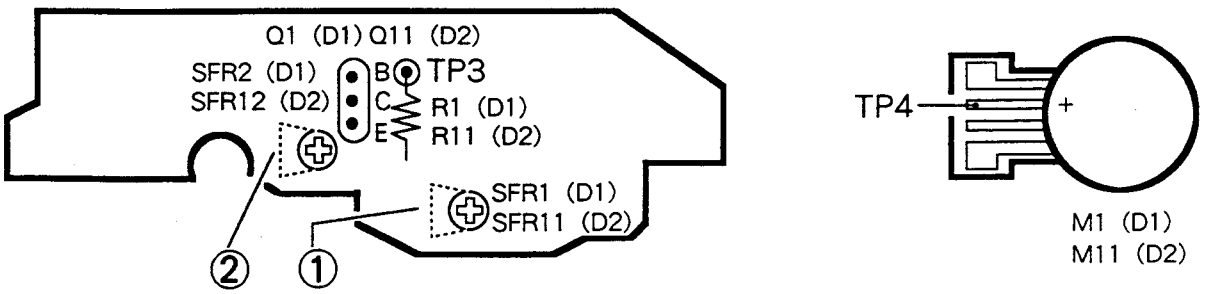
A MAIN C.B

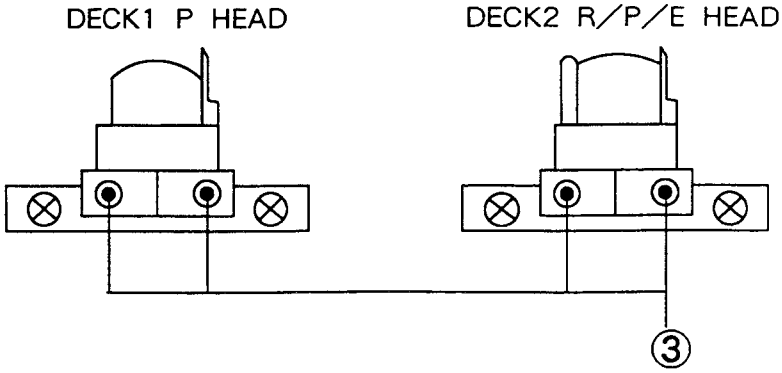


(TOP VIEW)

C DECK – 1 C.B

D DECK – 2 C.B





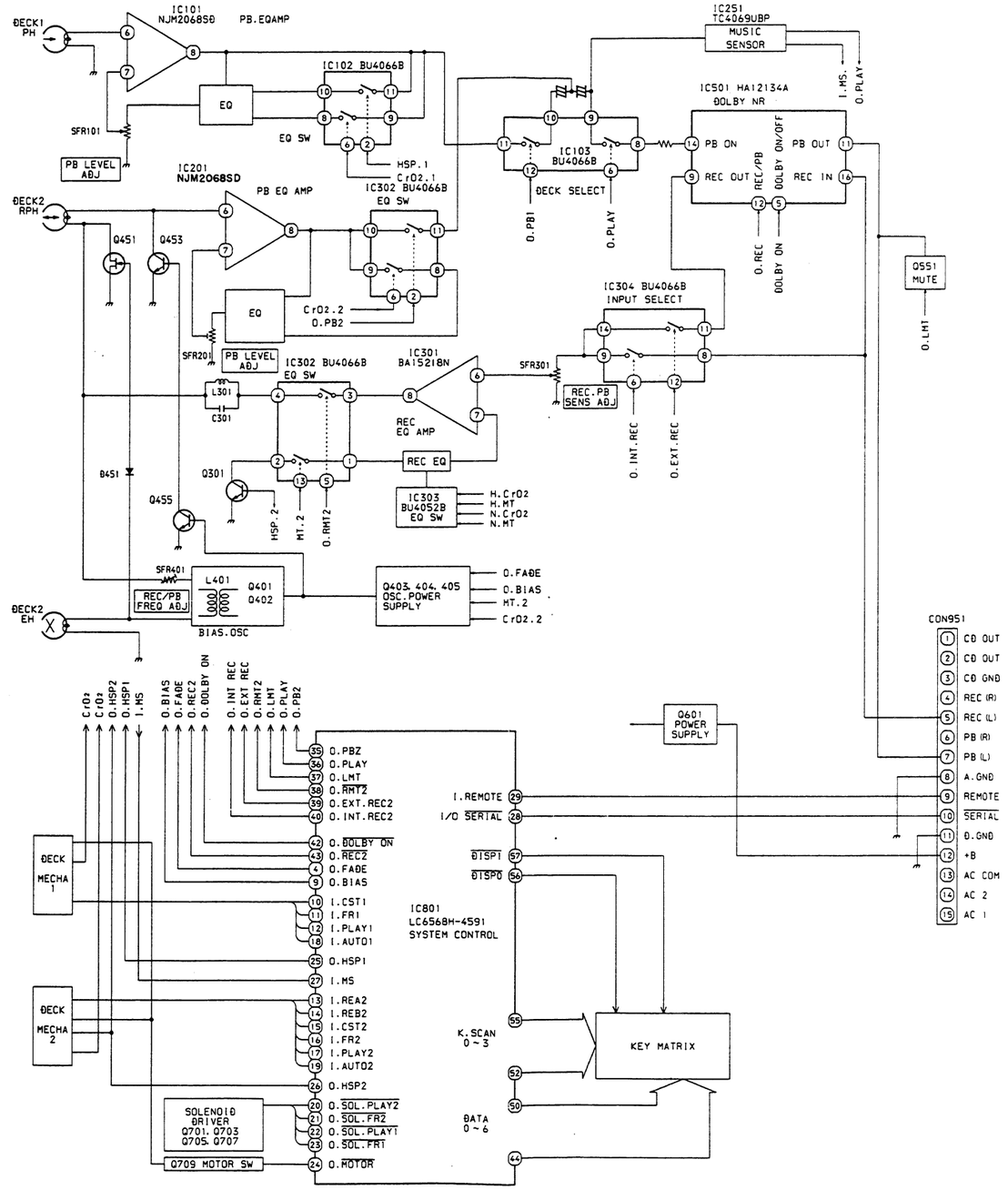
1. High Speed Adjustment (DECK1, DECK2)
   Settings : • Test tape : TTA – 100 (TTA – 111S)
   • Test point : PB – OUT (CON951)
   • Adjustment Location : SFR1 (DECK1)
   SFR11 (DECK2)
   Method : Play back the test tape, and make the high speed condition to be shorted between TP3 and TP4. Adjust for 6000Hz. After adjustment, remove the grounding lead wire.
2. Normal Speed Adjustment (DECK1, DECK2)
   Settings : • Test tape : TTA – 100 (TTA – 111S)
   • Test point : PB – OUT (CON951)
   • Adjustment Location : SFR2 (DECK1)
   SFR12 (DECK2)
   Method : Play back the test tape, adjust for 3000Hz.
3. Head Azimuth Adjustment (DECK1, DECK2)
   Settings : • Test tape : TTS – 310
   (TTA – 317E, SCC – 1429)
   • Test point : PB – OUT (CON951)
   • Adjustment Location : Head azimuth adjustment screw
   Method : Play back the 10kHz signal of the test tape and adjust so that the output becomes maximum.
   Next, perform on each FWD PLAY and REV PLAY mode.
4. PB Level Adjustment (DECK1, DECK2)
   Settings : • Test tape : TTS – 200 (TTA – 161, TCC – 130)
   • Test point : PB – OUT (CON951)
   • Adjustment Location : SFR101 (DECK1, Lch)
   SFR102 (DECK1, Rch)
   SFR201 (DECK2, Lch)
   SFR202 (DECK2, Rch)
   Method : Play back the test tape and adjust so that the output becomes 305mV ± 0.3dB.
5. PB Frequency Response Check (DECK1, DECK2)
   Settings : • Test tape : TTS – 310
   (TTA – 317E, SCC – 1429)
   • Test point : PB – OUT (CON951)
   Method : Play the 315Hz and 10kHz signals of the test tape and check the output of the 10kHz signal is 0dB ± 2.5dB with respect to that of the 315Hz signal.
6. Bias Frequency Adjustment (DECK2)
   Settings : • Test tape : TTA – 600 (TTA – 119K)
   • Test point : TP1
   • Adjustment Location : L401
   Method : Set DECK2 to the record mode and adjust L401 so that the frequency at TP1 is 108kHz ± 2kHz.
7. REC/PB Frequency Response Adjustment (DECK2)
   Settings : • Test tape : TTA – 600 (TTA – 119K)
   • Test point : PB – OUT (CON951)
   • Adjustment Location : SFR401 (Lch)
   SFR402 (Rch)
   Method : Connect TP2 (LMT TP) to ground (chassis), apply a 1kHz signal and adjust attenuator so that the level at the PB OUT is 20mV. Record and play back the 1kHz and 10kHz signals and adjust so that the output level of 10kHz signal is 0dB ± 0.5dB for 1kHz signal. After adjustment, remove the grounding lead wire.
8. REC/PB Sensitivity Adjustment (DECK2)
   Settings : • Test tape : TTA – 600 (TTA – 119K)
   • Test point : PB – OUT (CON951)
   • Adjustment Location : SFR301 (Lch)
   SFR302 (Rch)
   Method : Connect TP2 (LMT TP) to ground (chassis), apply a 1kHz signal and adjust attenuator so that the level at the PB OUT is 20mV. Record and play back the 1kHz signal and adjust SFR301 and SFR302 so that the output level is 20mV ± 0.3dB. After adjustment, remove the grounding lead wire.

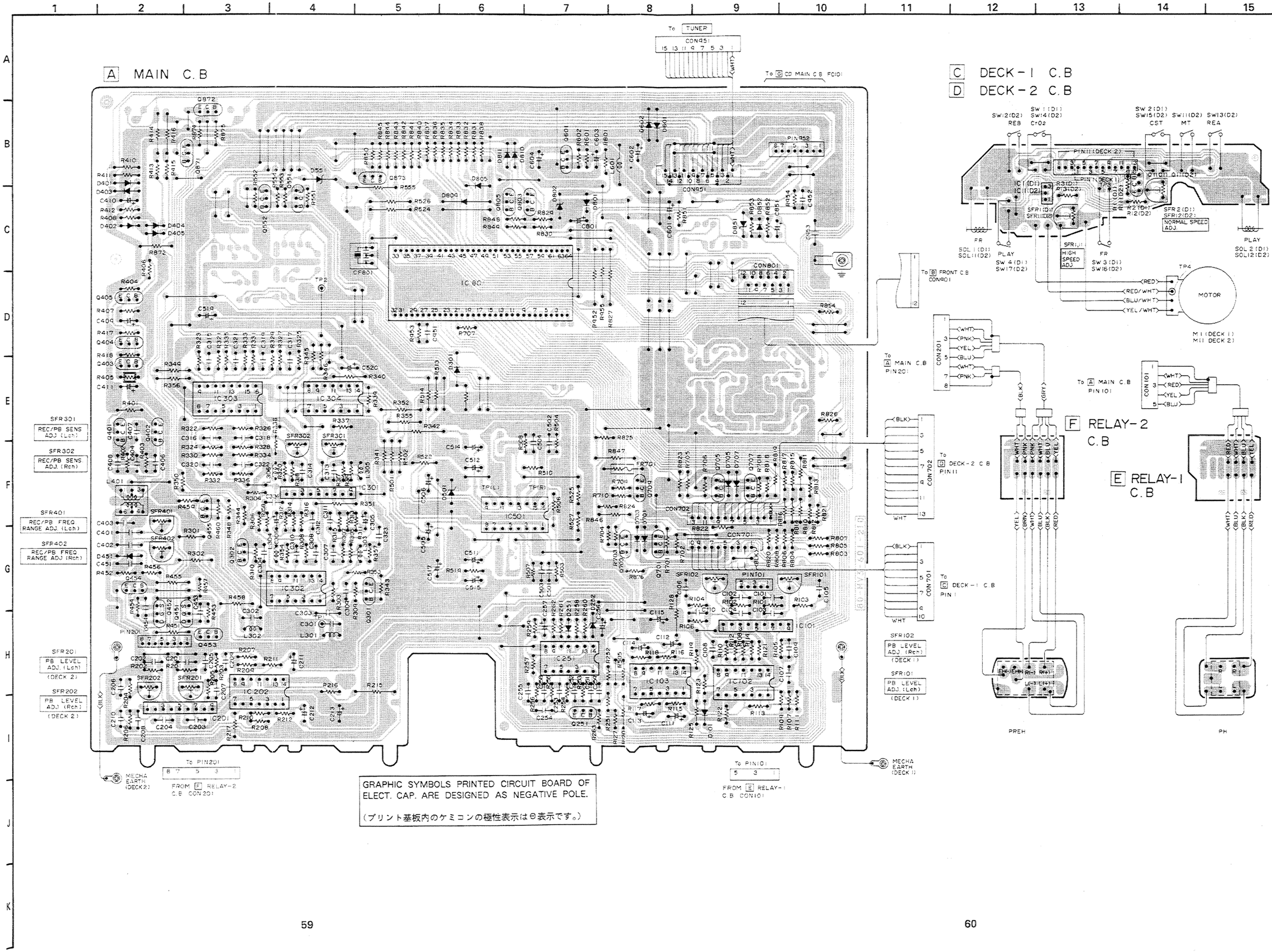
PRACTICAL SERVICE FIGURE (FD – N5)

PB output level :	200mV ± 1dB TTS – 200 (TTA – 161, TCC – 130)
REC/PB output level :	200mV ± 1dB(PB OUT, 1kHz)
Distortion (REC/PB) :	Less than 2.0% (NORM., CrO2)
Erasing ratio :	More than 60dB
Crosstalk :	More than 60dB
Channel separation :	More than 30dB
Noise (REC/PB) :	Less than 2.2mV (DOLBY OFF NORM.)
	Less than 1.1mV/1.0mV (DOLBY ON CrO2)
Noise (PB) :	Less than 2.0mV (DOLBY OFF NORM.)
	Less than 1.0mV/0.9mV (DOLBY B/C CrO2)
Recording bias frequency :	108kHz
Tape speed :	3000Hz ± 1.5%
Wow & flutter (W.RMS) :	Less than 0.18% (DECK1, 2)
Take – up torque :	25~60g-cm (DECK1, 2)
F.F & REW torque :	70~150g-cm (DECK1, 2)
Back tension :	2~6g-cm (DECK1, 2)
Test tape :	NORMAL : TTA – 600 (TTA – 119K)
	CrO2 : TTA – 610 (TTA – 119H)

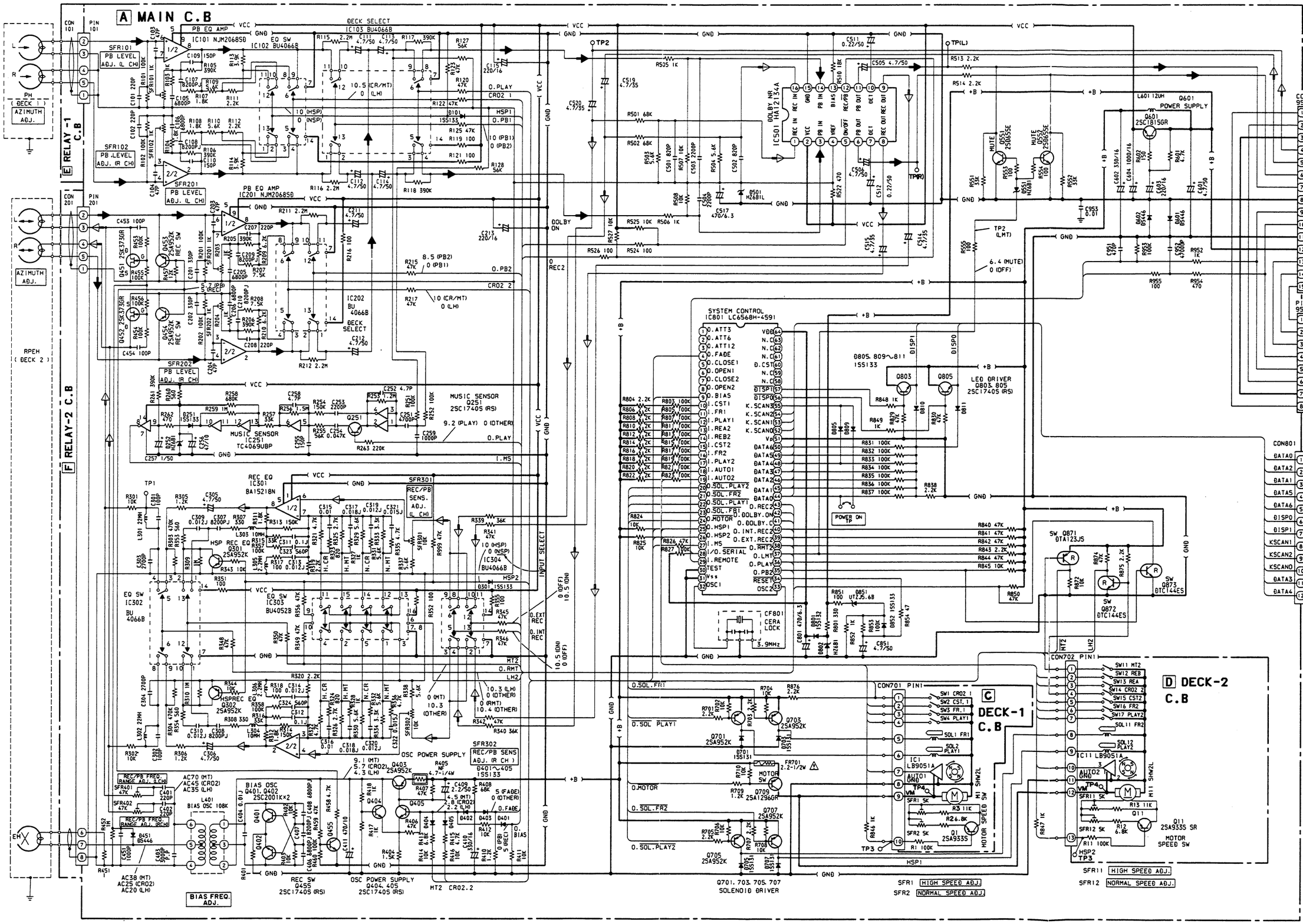
BLOCK DIAGRAM – 2 (FD – N5)

(DECK SECTION)




A MAIN C.B
C DECK-1 C.B
D DECK-2 C.B
F RELAY-2 C.B
E RELAY-1 C.B
To TUNER CON451
To G CD MAIN C.B FC101
To B FRONT C.B CON401
To D MAIN C.B PIN201
To A MAIN C.B PIN101
To DECK-2 C.B PIN11
To C DECK-1 C.B PIN1
SFR301 REC/PB SENS ADJ (Lch)
SFR302 REC/PB SENS ADJ. (Rch)
SFR401 REC/PB FREQ RANGE ADJ. (Lch)
SFR402 REC/PB FREQ RANGE ADJ (Rch)
SFR201 PB LEVEL ADJ (Lch) (DECK 2)
SFR202 PB LEVEL ADJ (Rch) (DECK 2)
SFR102 PB LEVEL ADJ (Rch) (DECK 1)
SFR101 PB LEVEL ADJ. (Lch) (DECK 1)
SW 1 (D1) SW12(D2) REB
SW14(D2) C-02
SW 2(D1) SW15(D2) CST
SW11(D2) MT
SW13(D2) REA
SW 4 (D1) SW17(D2)
SW 3 (D1) SW16(D2)
NORMAL SPEED ADJ
HIGH SPEED ADJ
SOL 1 (D1) SOL11(D2)
SOL 2 (D1) SOL12(D2)
MOTOR
M1 (DECK 1) M11 (DECK 2)
MECHA EARTH (DECK 2)
MECHA EARTH (DECK 1)
To PIN201
FROM E RELAY-2 C.B CON201
To PIN101
FROM E RELAY-1 C.B CON101
PREH
PH
IC 80
IC303
IC304
IC301
IC302
IC202
IC50
IC103
IC102
IC101
PIN352
PIN11(DECK 2)
PIN1(DECK 1)
CON801
CON451
CON702
CON701
CON201
CON101
TP2
TP4
TP(L)
TP(R)
GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.
(プリント基板内のケミコンの極性表示は⊖表示です。)

SCHEMATIC DIAGRAM – 2 (FD – N5)



IC DESCRIPTION (FD – N5)

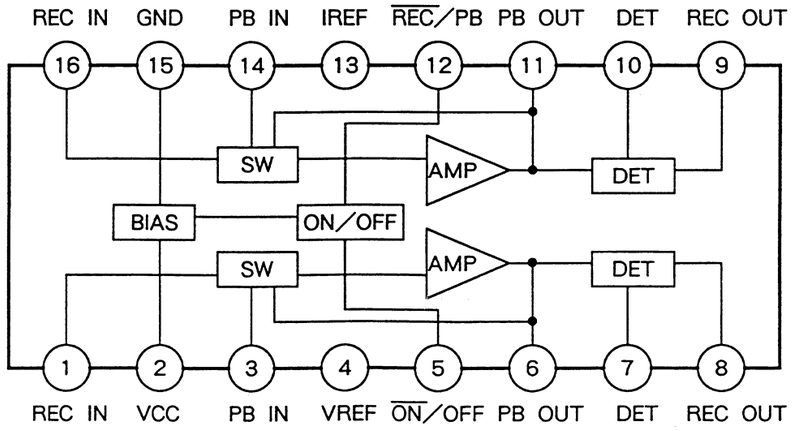
IC, LC6568H – 4591

Pin No.	Pin Name	I/O	Description
1	O·ATT3	O	Input signal level control output from the cross fade. Active "H" (Not used)
2	O·ATT6	O	
3	O·ATT12	O	
4	O·FADE	O	DECK 2 Recording bias oscillation output at the CBRS and cross fade. Active "H".
5	O·CLOSE1	O	DECK 1 Cassette box motor drive control output. Active "H" (Not used)
6	O·OPEN1	O	
7	O·CLOSE2	O	DECK 2 Cassette box motor drive control output. Active "H" (Not used)
8	O·OPEN2	O	
9	O·BIAS	O	DECK 2 Recording bias oscillation output. Goes "H" in the record and dubbing modes.
10	I·CST1	I	DECK 1 Cassette tape detection switching input. Goes "L" switch on.
11	I·FR1	I	DECK 1 FF and FWD detection switching input. Goes "L" FF or RWD switch on.
12	I·PLAY1	I	DECK 1 PLAY ddetection switching input. Goes "L" PLAY switch on.
13	I·REA2	I	DECK 2 Side A's accidental erasure prevention switch input. Goes "L" when recording is possible.
14	I·REB2	I	DECK 2 Side B's accidental erasure prevention switch input. Goes "L" when recording is possible.
15	I·CST2	I	DECK 2 Cassette tape detection switching input. Goes "L" switch on.
16	I·FR2	I	DECK 2 FF and RWD detection switching input. Goes "L" FF or RWD switch on.
17	I·PLAY2	I	DECK 2 PLAY detection switching input. Goes "L" PLAY switch on.
18	I·AUTO1	I	DECK 1 Reel disk pulse input.
19	I·AUTO2	I	DECK 2 Reel disk pulse input.
20	O·$\overline{\text{SOL·PLAY2}}$	O	DECK 2 PLAY solenoid drive output. Active "L".
21	O·$\overline{\text{SOL·FR1}}$	O	DECK 2 FF and RWD solenoid drive output. Active "L".
22	O·$\overline{\text{SOL·PLAY1}}$	O	DECK 1 PLAY solenoid drive output. Active "L".
23	O·$\overline{\text{SOL·FR1}}$	O	DECK 1 FF and RWD solenoid drive output. Active "L".
24	O·$\overline{\text{MOTOR}}$	O	DECK 1/2 Main motor contorl output. Goes "L" in the STOP mode.
25	O·HSP1	O	DECK 1 High speed control output. Goes "H" in the high speed dubbing mode.
26	O·HSP2	O	DECK 2 High speed control output. Goes "H" in the high speed dubbing mode.(Tape deck and CD)
27	I·MS	I	MS signal input. Active "L".
28	I/O $\overline{\text{SERIAL}}$	I/O	CD and amplifier serial data input and output.
29	I·REMOTE	I	Remote control serial data input.
30	TEST	–	MPU test pin to be connected to VSS.
31	VSS	–	MPU I/O and powe supply common pin.
32	OSC1	–	Pins to generate a 4MHz clock signal.
33	OSC2	–	
34	$\overline{\text{RESET}}$	I	MPU reset input. Goes "L" input resets the MPU.
35	O·PB2	O	DECK 1/2 PB output level control pin. Goes "H" in the DECK 2 PB.
36	O·PLAY	O	CUE/REVIEW muting and MS sensitivity switching output. Goes "H" PB.
37	O·LMT	O	Record and playback muting output. Active "H".
38	O·$\overline{\text{RMT2}}$	O	Record muting output. Goes "H" in the REC mute, rercording I/O aand REC pause.
39	O·EXT·REC2	O	DECK 2 Recording switching output. Goes "H" DECK 1 PB and DECK 2 REC.
40	O·INT·REC2	O	DECK 2 Recording switching output. Goes "H" in the record and dubbing modes. Goes "L" in the O·EXT·REC "H".
41	O·$\overline{\text{DOLBY C}}$	O	Dolby NR B/C switching output. Goes "H" Dolby C.
42	O·$\overline{\text{DOLBY ON2}}$	–	Dolby NR ON/OFF switching output. Goes "H" Dolby on.
43	O·$\overline{\text{REC2}}$	O	Dolby encode/decode switching output. Goes "H" REC, "L" dubbing.

Pin No.	Pin Name	I/O	Description
			KEY DATA IN K SCAN 0 is "H" / K SCAN 1 is "H" / K SCAN 2 is "H" / DISP 0 lights at "H" / DISP 1 lights at "H"
44	DATA 0	I	PLAY 1 KEY ligths / FF 1 KEY ligths / DOLBY KEY IN / DOLBY B lights /
45	DATA 1	I	RWD 1 KEY IN / H·DUBB KEY IN / / R·PLAY 1 lights / CD REC lights
46	DATA 2	I	STOP 1 KEY IN / N·DUBB KEY IN / / F·PLAY 1 lights / SYNC DUBB lights
47	DATA 3	I	FF 2 KEY IN / REC 2 KEY IN / REV MODE KEY IN / REC 2 lights / ⇄
48	DATA 4	I	PLAY 2 KEY IN / PAUSE 2 KEY IN / / PAUSE 2 lights / ↩
49	DATA 5	I	RWD 2 KEY IN / / / F·PLAY 2 lights /
50	DATA 6	I	STOP 2 KEY IN / CD.N.REC KEY IN / / R·PLAY 2 lights /
51	VP	–	GND
52	K·SCAN 0	O	KEY SCAN outputs for DATA 0~DATA6.
53	K·SCAN 1	O	
54	K·SCAN 2	O	
55	K·SCAN 3	O	
56	$\overline{\text{DISP 0}}$	O	DISP 0 and DISP 1 INDI. output pin.
57	$\overline{\text{DISP 1}}$	O	
58 59 61 62 63	NC	–	Not used.
60	D·CST	–	Cassette box LED display drive output. Power ON → "H", Power OFF → "L"
64	VDD	–	Power Supply pin.(+5V)

IC BLOCK DIAGRAM (FD – N5)

IC, HA12134A



IC, CXP50112 – 199Q

Pin No.	Pin Name	I/O	Description
1 ~ 20	SEG1 ~ SEG20	O	Display segment output terminal (Pin 12 is not used.)
21	——	—	Not used.
22	——	—	
23	——	—	
24 ~ 28	G1 ~ G5	O	Display grid scan output terminal.
29	SCOR	I	Interrupts at rising edge of subcodes S0 + S1 input
30	TX	—	Not used.
31	TEX	—	Peak search (AD converter) reference clock input (Connected to GND)
32	$\overline{\text{REST}}$	I	Reset input terminal
33	——	—	Not used.
34	VDD	I	Power supply input terminal(+5V)
35 ~ 39	KEY1 ~ KEY5	I	KEY input terminal (Pin 38,39 connected to VDD)
40	O/C	I	Tray open/close input terminal
41	$\overline{\text{P-SW}}$	I	Power switch input terminal: ON/OFF (STAND BY) selection
42	SYNC I/O	I/O	Synchronizing signal input/output terminal with external equipment (8-bit serial)
43	WDCK	I	Word clock signal input terminal(Not used)
44	SQCK	I	Subcode Q reading clock input terminal
45	GFS		Signal input terminal to indicate the lock state of frame-synchronizing
46	SUBQ		Subcode Q input terminal
47	MUTG	O	Muting output terminal to DSP
48	SENS	I	Connects to SENSE terminal of DSP
49	XRST	O	System reset output terminal
50	DATA		Serial data output terminal to DSP
51	XLT	O	Data latch output terminal
52	CLK		Data transmission clock
53	$\overline{\text{P. HOLD}}$		Indicates peak search operation. H output during peak searching. (Not used)
54	$\overline{\text{ADINT}}$		Output terminal of A/D conversion circuit initial and AD START pulse(Not used
55	$\overline{\text{COMP}}$	I	A/D conversion timing signal input terminal(Connected to GND)
56	$\overline{\text{T-PLAY}}$		Timer play mode switch input terminal. Timer play in L.
57	E OP.OFF		Easy operation. OFF in "H" (Note 1)
58	P.S MODE		Peak search mode select input terminal(Connected to GND) H: P.S 1 mode L: P.S 2 mode
59	SP-OFF	O	H output when DSP, SSP, or RF amplifier is off.
60	P.S H-SPD		H output in peak searching(Not used)

Pin No.	Pin Name	I/O	Description
61	FOK	I	H input when focus to indicate a state of focus is correct
62	RMC	I	42-bit serial remote input
63	OPEN	O	H output in tray open output open mode.
64	CLOSE		H output in tray close output close mode.
65	H. SPD		H output in the high speed mode.
66	8/$\overline{12}$		H output when a disc's operation time is 23 minutes or less is used.
67	$\overline{\text{LDON}}$	O	L output when ON/OFF output terminal of laser diode is ON.
68	MDT		Mode data output terminal(Not used)
69	MCK		Mode clock output terminal(Not used)
70	$\overline{\text{MLE}}$		Mode latch output terminal(Not used)
71	GND	—	GND
72	XTAL	O	Ceramic oscillator connection 4.19 MHz
73	-	—	Not used.
74	EXTAL	I	Ceramic oscillation connection 4.19 MHz
75	VREF	—	GND
76	VFDP	—	Power supply input termianal for FL tube display
77	F. B OFF	O	H output when fucus bias is off. (Not used)
78	EMP		H output when emphasis is ON, independ of Normal/High speed mode.
79	A-MUTE		H output when analog mute output is ON.
80	$\overline{\text{P-OFF}}$		H output when system ON/OFF output is OFF.

Note 1: EOP means that a tray is opened when NO DISC is received during CD play input (from all the mode) in "EASY OPERATION". Also, it means that the tray is opened when NO DISC is received during Timer set CD input.

("All the mode" means that CD is played with a command of PLAY key input, ten key input, or PLAY with SYNC REC or FUNCTION CD input.)

IC, CXA1082S

Pin No.	Pin Name	I/O	Description
1	DVEE	–	-5V terminal.
2	DFCT	I	Interface input terminal for microcomputer.
3	TE	I	Tracking error signal input terminal.
4	TZC	I	Tracking zero-cross comparator input terminal.
5	ATSC	I	ATSC detection window comparator input terminal.
6	FE	I	Focus error signal input terminal.
7	VC	–	Connected to GND
8	FGD	O	Capacitor is inserted between this pin and pin 3 to decrease the focus servo's high-frequency gain.
9	FS3	I	Focus servo's high-frequency gain is selected by FS3 on/off operation.
10	FLB	O	Time-constant external terminal for raising the focus servo's low-frequency range.
11	FEO	O	Power transistor drive's operational amplifier output terminal.
12	FE	I	Focus amplifier inversion input terminal.
13	SRCH	O	Time-constant external terminal for forming a focus search wave.
14	TG0	O	Time-constant external terminal for tracking high-frequency gain selection.
15	TG2	O	Time-constant external terminal for tracking high-frequency gain selection.
16	AVCC	–	+5V terminal.
17	TAO	O	Tracking error signal output terminal.
18	TA	I	Tracking amplifier's inversion input terminal.
19	SL	I	Threading amplifier's noninversion input terminal.
20	SLO	O	Threading amplifier output terminal.
21	SL	I	Threading amplifier's inversion input terminal.
22	SSTOP	I	Inputs the ON/OFF detection signal of the limit switch which detects the innermost circumference. Fixed at"L" in this unit.
23	FSET	I	Terminal for setting the focus tracking's phase compensation peak and CLV LPF (f0).
24	SENS	O	Outputs IC's internal state corresponding to data address (It is changed according to address of internal serial register.)
25	AVEE		-5V
26	C. OUT	O	Outputs signal for counting number of tracks in high-speed mode.
27	$\overline{\text{DIRCT}}$	I	Used in one-track jump. Normally "H". "L" when track jump pulse is inversed. Consequently "H" when normal tracking mode is set. "L" in a period when the rising and falling edges of TZC are detected.
28	$\overline{\text{XRST}}$	I	"L" when all the internal register are cleared.
29	DATA	I	Serial data transmission from CPU. Input started from LSB.
30	$\overline{\text{XLT}}$	I	"L" when data of internal serial shift register is transmitted to the latch address-decoded.
31	CLK	I	DATA transmission clock. Data is taken in at the falling edge.
32	D GND	–	GND terminal.
33	BW	I	Loop filter's time-constant external terminal. (Not used)
34	PDI	I	CXD1167Q phase comparator output PDO input terminal.
35	ISET	I	Passes a current to determine the focus search, tracking jump, and threading kick height.

Pin No.	Pin Name	I/O	Description
36	VCOF	I	VCO's free-running frequency is proportional to the resistance value between this pin and pin 31.
37	3.5V		
38	C864	O	8.64MHz VCO output terminal.
39	LOCK	I	Connected to the LOCK terminal of CXD1167Q.
40	MDP	I	CXD1167Q MDP connection terminal.
41	MON	I	CXD1167Q MON connection terminal.
42	FSW	I	LPF time-constant external terminal of CLV servo's error signal.
43	DVCC	—	+5V terminal
44	SPDL	I	Spindle drive amplifier's inversion input terminal.
45	SPDLO	O	Spindle motor drive terminal.
46	WDCK	I	Word clock signal input terminal.
47	FOK	I	Focus OK signal input terminal.
48	MIRR	I	Mirror signal input terminal

IC, CXA1081S

Pin No.	Pin Name	I/O	Description
1	RFI	I	The RF summing amplifier output is C-connected and input.
2	RFO	O	RF summing amplifier output. Eye pattern test point.
3	RFE	I	Inverting input of the RF summing amplifier. A feedback resistor is connected between pins 2 and 3.
4	P/N	I	Switches the input according to the polarity of the laser diode. (Note used)
5	LD	O	Output to control the laser diode output.
6	PD	I	Connects the photo-detector which detects the laser diode output.
7	PD1	I	RFI-V amplifier (1) inverting input. Connected to PIN diode A + C for the current intput.
8	PD2	I	RFI-1 amplifier (2) inverting input. Connected to PIN diode B + D for the current input.
9	VC	I	Reference voltage input within the IC. Connected to pin 14 with single power supply. Connected to the ground with the positive and negative power supply.
10	F	I	FI-V amplifier inverting input. Connected to PIN diode F for the current input.
11	E	I	EI-V amplifier inverting input. Connected to PIN diode E for the current input.
12	EO	O	EI-V amplifier output. A feedback resistor is connected.
13	EI	I	Adjusts the EI-V amplifier gain.
14	VR	O	Outputs the neutral voltage. Connected to pin 9 with the single powersupply. OPEN with positive and negative power supply.
15	CC2	O	Defect bottom hold (1) output. A capacitor is connected between pins 15 and 16.
16	CC1	I	The defect bottom (1) output is C-connected and input.
17	VEE	–	Grounded with the single power supply. Becomes a negative power supply with the positive and negative power supply. (-5V)
18	FE BIAS	I	Inputs a bias voltage for the positive-phase input of the focus error amplifier.
19	FE	O	Focus error amplifier output.
20	TE	O	Tracking error amplifier output.
21	DEFECT	O	Defect detection output. Outputs the H" signal that detects a defect on the mirror surface.
22	MIRR	O	Mirror comparator output.
23	CP	O	A mirror hold capacitor is connected to this pin.
24	CB	O	The defect bottom hold (2) capacitor is connected to this pin.
25	DGND	–	Ground in the digital circuit.
26	ASY	I	Auto-symmetry control input.
27	EFM	O	EFM output comparator output.
28	FOK	O	Focus OK output.
29	$\overline{\text{LD ON}}$	I	Laser diode ON/OFF control input.
30	VCC	–	Positive power supply (+5V)

IC, LC7883

Pin no	Pin name	I/O	Discription
1	CH1OUT	I	DAC CH-1 output.
2	VREF H	I	Reference voltage"H" input.(+5V)
3	AVDD	—	Power supply pin of analog circuits.(+5V)
4	DVDD	—	Power supply pin of digital circuits.(+5V)
5	BLCK	I	Bit clock input.
6	DATA	I	Digital audio data input. The data is input bit-seriaiil from the MSB.
7	LRCK	I	LR clock input.
8	TEST	I	Test pin (normally, "L") (Connected to GND)
9	$\overline{\text{ATT}}$	I	Attenuator data input. The data is input bit-serial form the LSB. (Connected to GND)
10	SHIFT	I	Attenuator data transfer clock input. (Connected to GND)
11	LATCH	I	Attenuator data latch clock input. (Connected to GND)
12	INITB	I	Initializing signal input (normally, "H")
13	TEST	—	Unused (Connected to GND)
14	EMPH2	I	Deemphasis setting pins (Connected to GND)
15	EMPH1	I	Deemphasis setting pins
16	D/N	I	Hi-speed/standard speed switching
17	SOC2	I	Input source select pins (PULL DOWN) (Connected to GND)
18	SOC1	I	Input source select pins (PULL DOWN) (Connected to GND)
19	MODE	I	Operation mode setting pins setting pins (PULL DOWN) Test pins (normally, "H") (PULL DOWN)
20	TEST	I	Operation mode setting pins setting pins (PULL DOWN) Test pins (normally, "H") (PULL DOWN) (Connected to GND)
21	TEST	I	Operation mode setting pins setting pins (PULL DOWN) Test pins (normally, "H") (PULL DOWN) (Connected to GND)
22	DGND	—	Ground pin of digital circuits
23	CLKOUT	O	Clock output (Not used)
24	XIN	I	Crystal oscillator input
25	XOUT	O	Crystal oscillator output
26	AGND	—	Ground pin of analog circuits
27	VREF L	I	Reference voltage "L" input (Connected to GND)
28	CH2OUT	O	DAC CH-2 output

IC, CXD1167Q

Pin No.	Pin Name	I/O	Description
1	FSW	O	Output to switch the time constant of the spindle motor output filter.
2	MON	O	Spindle motor on/off control output.
3	MDP	O	Spindle motor drive output. Coarse control in the CLV.S mode and phase control in the CLV.P mode.
4	MDS	O	Spindle motor drive output. Speed control in the CLV.S mode.
5	EFM	I	Inputs an EFM signal from the RF amplifier.
6	ASY	O	Output to control the slice level of the EFM signal.
7	LOCK	O	The GFS signal is sampled by the WFCK/16. When the GFS signal is "H", this pin outputs "H", and when the signal is "L" 8 times continuously, it outputs "L".
8	VCOO	O	VCO output. When this is locked to the EFM signal. f = 8.6436MHz
9	VCOI	I	VCO input.
10	TEST	—	Connected to GND. (0V)
11	PDO	O	Phase comparison output between the EFM signal and VCO/2.
12	VSS	—	Connected to GND. (0V)
13	CLK	I	Inputs a clock signal for the serial data transfer from CPU. Latches data at the rise of the clock signal.
14	XLT	I	Latch input from CPU. Latches 8-bit shift register data (serial data from CUP) to each register.
15	DATA	I	Inputs serial data from CPU.
16	$\overline{\text{XRST}}$	I	System reset input. The system is reset at "L" input.
17	CNIN	I	Tracking pulse input.
18	SENSE	O	Outputs the internal state according to the address.
19	MUTG	I	Muting input. When the ATTM in the internal register is "L", the system is in the normal state if the MUTG is "L" and the sound is muted if the MUTG is "H".
20	CRCF	O	Outputs the CRC checking result of sub-code Q. (Reserved)
21	EXCK	I	Clock input for the sub-code serial output. (Connected to GND)
22	SBSO	O	Sub-code serial output. (Reserved)
23	SUBQ	O	Sub-code Q output.
24	SCOR	O	Sub-code sync S0 + S1 output.
25	SQCK	I/O	Clock signal for reading of sub-code Q.
26	SQEX	I	SQCK select input. (Connected to +5V)
27	WFCK	O	Digital audio interface output. (Reserved)
28	GFS	O	Display output of the frame sync locking state. Goes "H" when locked.
29 ~ 32	TEST (DB08) ~ TEST (DB05)	—	Connected to GND. (Do not open.) Data terminal of external RAM.
33	VDD	—	Power supply (+5V)
34 ~ 37	TEST (DB04) ~ TEST (DB01)	—	Connected to GND. (Do not open.) Data terminal of the external RAM.

Pin No.	Pin Name	I/O	Description
38 ~ 48	TEST (RA01) ~ TEST (RA11)	—	Connected to GND. (Do not open.) Address output of the external RAM.
49	TEST ($\overline{\text{RAWE}}$)	—	Connected to GND (Do not open) Write Enable output of the external RAM
50	TEST ($\overline{\text{RACS}}$)	—	Connected to GND (Do not open) Chip Select output of the external RAM
51	C4M	O	1/2 division output of the crystal oscillator. f = 4.2336MHz(Reserved)
52	VSS	—	Connected to GND. (0V)
53	XTAI	I	Crystal oscillator input. f = 8.4672MHz
54	XTAO	O	Crystal oscillator output. f = 8.4672MHz(Reserved)
55	MD1	I	Mode select input 1 used at "H" Mode select input 2 used at "L" Mode select input 3 used at "H" Mode (Used in the mode with the clock frequency 8.4672MHz, the digital output OFF, the digital filter ON.)
56	MD2	I	
57	MD3	I	
58	SLOB	I	Input to switch the code of the audio data output. "L" causes the 2 second complement output and "H" causes the offset binary output. (Connected to GND.)
59	PSSL	I	Input to switch the mode of the audio data output. "L" causes serial output and "H" causes parallel output. (Connected to GND.)
60	APTR	O	Aperture correction control output. 44.1kHz with the filter OFF. (Reserved)
61	APTL	O	Aperture correction control output. 44.1kHz with the filter OFF. (Reserved)
62	DA01 (C1F1)	O	DA01(LSB of parallel audio data) output with PSSL = "H". C1F1 output with PSSL = "L". (Reserved)
63	DA02 (C1F2)	O	DA02 output with PSSL = "H". C1F2 output with PSSL = "L". (Reserved)
64	DA03 (C2F1)	O	DA03 output with PSSL = "H". C2F1 output with PSSL = "L". (Reserved)
65	DA04 (C2F2)	O	DA04 output with PSSL = "H". C2F2 output with PSSL = "L". (Reserved)
66	DA05 (C2FL)	O	DA05 output with PSSL = "H". C2FL output with PSSL = "L". (Reserved)
67	DA06 (C2PO)	O	DA06 output with PSSL = "H". C2PO output with PSSL = "L". (Reserved)
68	DA07 (RFCK)	O	DA07 output with PSSL = "H". RFCK output with PSSL = "L". (Reserved)
69	DA08 (WFCK)	O	DA08 output with PSSL = "H". WFCK output with PSSL = "L". (Reserved)
70	DA09 ($\overline{\text{PLCK}}$)	O	DA09 output with PSSL = "H". PLCK output with PSSL = "L". (Note 1)(Reserved)
71	DA10 (VGFS)	O	DA10 output with PSSL = "H". VGFS output with PSSL = "L". (Reserved)
72	DA11 (GTOP)	O	DA11 output with PSSL = "H". GTOP output with PSSL = "L". (Reserved)
73	VDD	—	Power supply (+5V)
74	DA12 ($\overline{\text{RA0V}}$)	O	DA12 output with PSSL = "H". RA0V output with PSSL = "L". (Reserved)
75	DA13 (C4LR)	O	DA13 output with PSSL = "H". C4LR output with PSSL = "L". (Reserved)
76	DA14 (C210)	O	DA14 output with PSSL = "H". C210 output with PSSL = "L".
77	DA15 (C210)	O	DA15 output with PSSL = "H". C210 output with PSSL = "L". (Note 2)(Reserved)
78	DA16 (DATA)	O	DA16(MSB of parallel audio data) output with PSSL = "H".
79	WDCK	O	Strobe signal output. 88.2kHz with the filter OFF.
80	LRCK	O	Strobe signal output. 44.1kHz with the filter OFF.

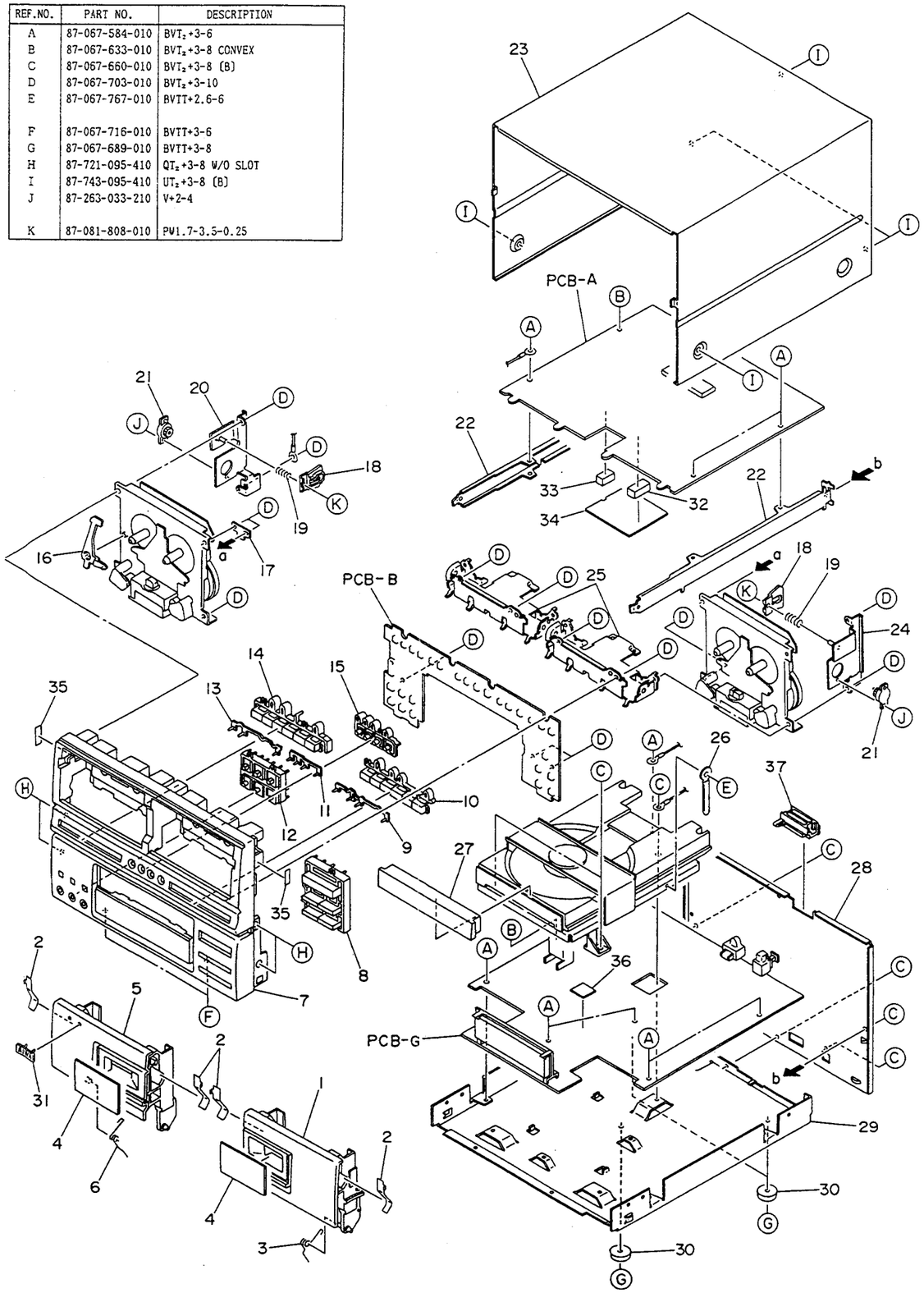
Note 1) $\overline{\text{PLCK}}$: VCO/2 output. When locked to the EFM signal, f = 4.3218MHz

Note 2) C210 : Bit clock signal, f = 2.1168MHz

Note 3) DATA: Audio signal serial data output

EXPLODED VIEW – 1 (FD – N5)

REF.NO.	PART NO.	DESCRIPTION
A	87-067-584-010	BVT$_2$+3-6
B	87-067-633-010	BVT$_2$+3-8 CONVEX
C	87-067-660-010	BVT$_2$+3-8 (B)
D	87-067-703-010	BVT$_2$+3-10
E	87-067-767-010	BVTT+2.6-6
F	87-067-716-010	BVTT+3-6
G	87-067-689-010	BVTT+3-8
H	87-721-095-410	QT$_2$+3-8 W/O SLOT
I	87-743-095-410	UT$_2$+3-8 (B)
J	87-263-033-210	V+2-4
K	87-081-808-010	PW1.7-3.5-0.25

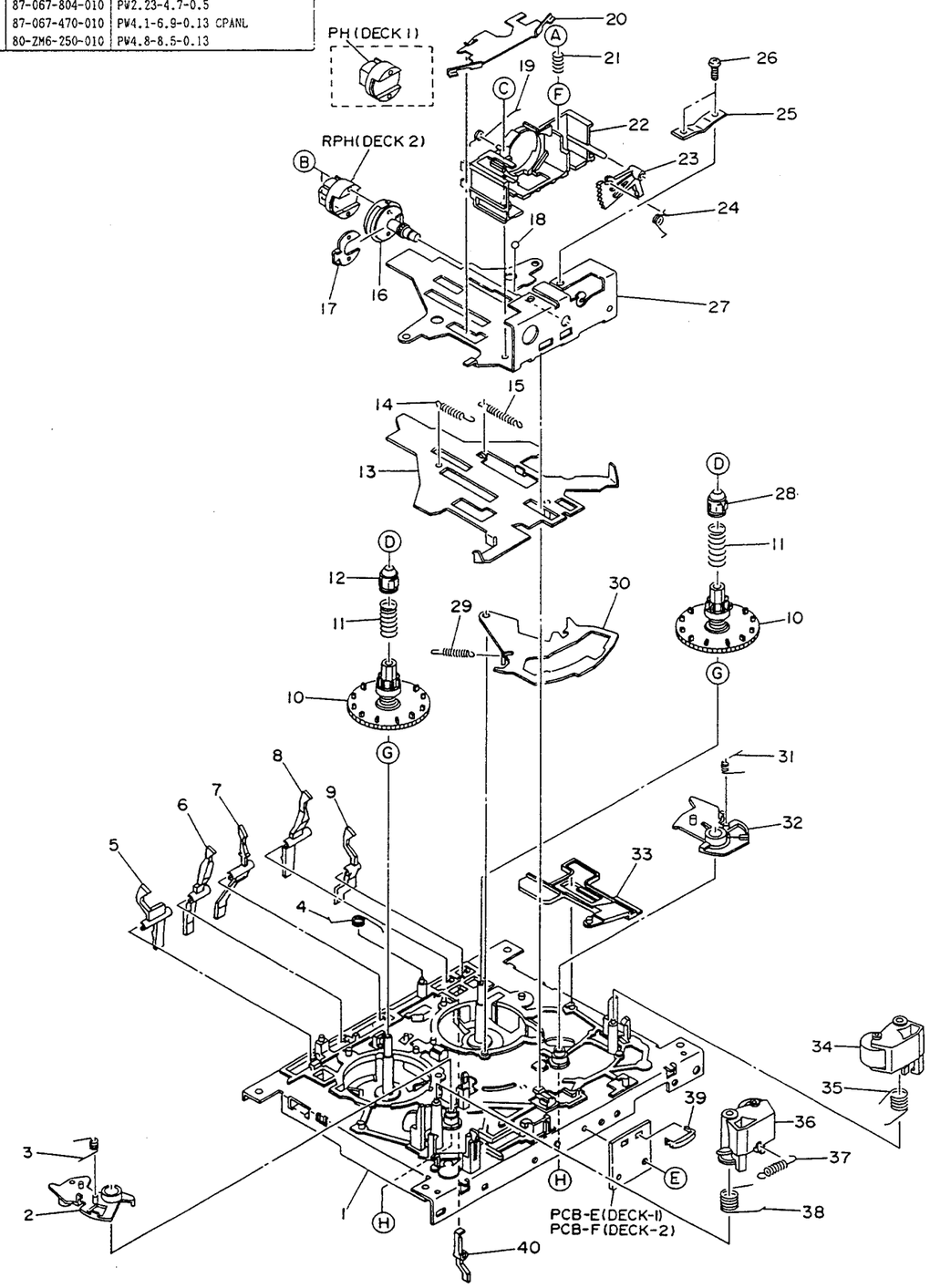


MECHANICAL PARTS LIST (FD – N5)

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q. TY
	1-1	★80-MV3-004-019	BOX, CASSETTE R	*	1
	1-2	★82-202-217-110	P-SPRING, CASSETTE HOLDER		4
	1-3	★80-MV3-207-019	T-SPRING, EJECT 1	*	1
	1-4	★80-MV3-012-019	WINDOW, DECK 1	*	2
	1-5	★80-MV3-023-019	BOX, CASSETTE L	*	1
	1-6	★80-MV3-208-019	T-SPRING, EJECT 2	*	1
	1-7	★09-047-650-010	CABINET FRONT ASSY(Y, YK)	*	1
	1-7	★09-047-651-010	CABINET FRONT ASSY(YU, YC)	*	1
	1-8	★80-MV3-006-019	KEY, CD PLAY	*	1
	1-9	★80-MV3-015-019	INDICATOR, DECK 2	*	1
	1-10	★80-MV3-008-019	KEY, DECK 2 (Y)	*	1
	1-10	★80-MV3-032-019	KEY, DECK 2 (YU, YC, YK)	*	1
	1-11	★80-MV3-016-019	INDICATOR, DOLBY	*	1
	1-12	★80-MV3-005-019	KEY, CD EDIT	*	1
	1-13	★80-MV3-014-019	INDICATOR, DECK 1	*	1
	1-14	★80-MV3-007-019	KEY, DECK 1 (Y)	*	1
	1-14	★80-MV3-031-019	KEY, DECK 1 (YU, YC, YK)	*	1
	1-15	★80-MV3-009-019	KEY, DOLBY (Y)	*	1
	1-15	★80-MV3-033-019	KEY, DOLBY (YU, YC, YK)	*	1
	1-16	★86-535-242-210	LEVER, EJECT L		1
	1-17	★80-MV3-214-010	PLATE, MECHANISM	*	1
	1-18	★80-CD3-233-010	PLATE, LOCK		2
	1-19	★80-MV3-218-019	C-SPRING, LOCK	*	2
	1-20	★80-MV3-201-019	HOLDER LOCK 1 ASSY	*	1
	1-21	★87-063-151-010	OIL-DAMPER 37 SLIM		2
	1-22	---	HOLDER, PCB		2
	1-23	★80-MV3-017-019	CABINET, STEEL (YU, YC)	*	1
	1-23	★80-MV3-038-018	CABINET, STEEL (Y, YK)	*	1
	1-24	★80-MV3-204-019	HOLDER, LOCK 2 ASSY	*	1
	1-25	---	HOLDER, MECHANISM		2
	1-26	---	WIRE BINDER		1
	1-27	★80-MV3-039-019	PANEL, TRAY	*	1
	1-28	★80-MV3-025-010	PANEL, REAR (YN)	*	1
	1-28	★80-MV3-030-010	PANEL, REAR (YJ)	*	1
	1-28	★80-MV3-028-010	PANEL, REAR (YNE)	*	1
	1-28	★80-MV3-029-010	PANEL, REAR (YK)	*	1
	1-28	★80-MV3-026-019	PANEL, REAR (YU)	*	1
	1-28	★80-MV3-027-019	PANEL, REAR (YC)	*	1
	1-29	---	CHASSIS, MAIN		1
	1-30	★87-085-218-010	FOOT, H5		3
	1-31	★84-764-009-119	BADGE, AIWA		1
	1-32	★87-063-156-010	S CUSHION, 15-35-10 (Y, YK)		1
	1-32	★87-063-158-019	S CUSHION, 15-35-10 (YU, YC)		1
	1-33	★87-063-157-010	S CUSHION, 14-20-10 (Y, YK)		1
	1-33	★87-063-159-019	S CUSHION, 14-20-10 (YU, YC)		1
	1-34	★80-MV3-215-010	PLATE, SHIELD	*	1
	1-35	★80-MV3-217-019	SHEET, 24-10-0.2	*	2
	1-36	★80-HJ4-620-019	SHEET, CONTACT-A		1
	1-37	★89-VT5-202-019	BUSHING, CORD		1

EXPLODED VIEW – 2 (FD – N5)

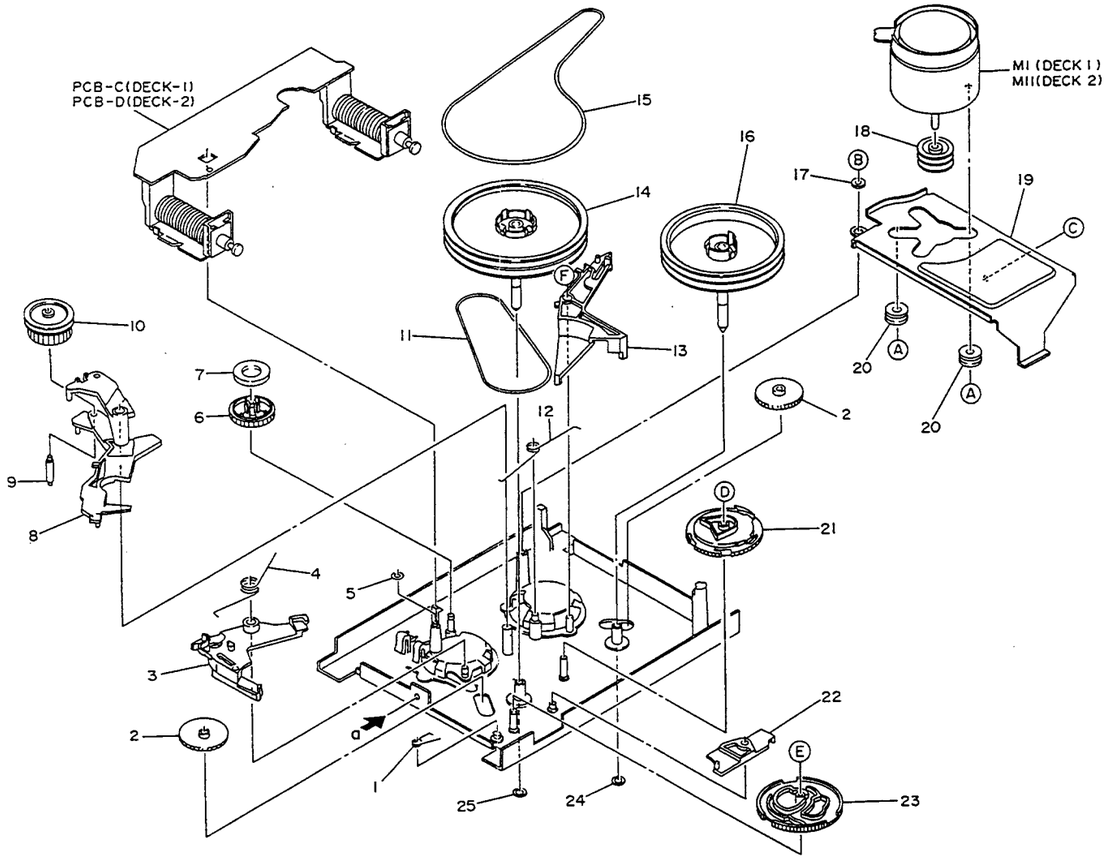
REF.NO.	PART NO.	DESCRIPTION
A	87-251-036-210	U+2-8
B	80-ZM6-207-010	V+1.6-7
C	87-263-033-110	V+2-4
D	86-524-418-010	VFT$_2$+1.4-5
E	87-067-174-010	VTT+2-4
F	87-067-804-010	PW2.23-4.7-0.5
G	87-067-470-010	PW4.1-6.9-0.13 CPANL
H	80-ZM6-250-010	PW4.8-8.5-0.13



PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q. TY
	2-1	★80-ZM6-201-010	CHASSIS ASSY B		1
	2-2	★86-535-239-110	LEVER, PLAY R		1
	2-3	★86-535-283-010	T-SPRING, PLAY GEAR R		1
	2-4	★80-ZM6-206-010	T-SPRING, CASSETTE		1
	2-5	★86-575-322-010	LEVER, REC A (D2)	*	1
	2-6	★86-575-325-010	LEVER, METAL (D2)	*	1
	2-7	★86-575-324-010	LEVER, CASSETTE	*	1
	2-8	★86-575-327-110	LEVER, CLOME	*	1
	2-9	★86-575-323-010	LEVER, REC B (D2)	*	1
	2-10	86-575-330-010	GEAR REEL ASSY	*	2
	2-11	★86-535-293-010	C-SPRING, REEL TABLE		2
	2-12	★86-524-218-119	STOPPER, S REEL TABLE		1
	2-13	★86-535-215-310	SLIDE PLATE ASSY		1
	2-14	★86-535-285-010	E-SPRING, SLIDE		1
	2-15	★86-575-226-010	E-SPRING, HEAD CHASSIS	*	1
	2-16	86-575-306-110	HOLDER, HOUSING	*	1
	2-17	★86-575-305-010	PLATE, HOUSING	*	1
	2-18	★87-073-018-010	BOARD, STEEL 1.588		1
	2-19	★86-575-310-110	T-SPRING, HEAD	*	1
	2-20	★86-575-347-010	P-SPRING, HEAD 2	*	1
	2-21	★86-541-318-110	C-SPRING, AZIMUTH		1
	2-22	86-575-288-210	GUIDE, TAPE	*	1
	2-23	★86-575-290-010	GEAR, SEGUMENT	*	1
	2-24	★80-ZM6-229-010	T-SPRING, SEGUMENT GEAR 2		1
	2-25	★86-575-343-110	P-SPRING, AZIMUTH 2	*	1
	2-26	★86-535-297-010	SCREW, AZIMUTH 3H		2
	2-27	★86-575-311-110	CHASSIS, HEAD	*	1
	2-28	★86-524-233-119	STOPPER, T REEL PLATE		1
	2-29	★86-535-284-010	E-SPRING, DIRECTION LEVER		1
	2-30	★86-535-218-210	DIRECTION LEVER ASSY		1
	2-31	★86-535-282-010	T-SPRING, PLAY GEAR F		1
	2-32	★86-535-238-210	LEVER, PLAY F		1
	2-33	★86-575-345-010	LEVER, SW2	*	1
	2-34	★86-535-226-210	PINCH LEVER ASSY F		1
	2-35	★86-575-222-110	T-SPRING, PINCH ROLLER F	*	1
	2-36	★86-535-228-310	PINCH LEVER ASSY R		1
	2-37	★86-575-339-010	E-SPRING, PINCH 22	*	1
	2-38	★86-575-341-010	T-SPRING, PINCH L	*	1
	2-39	★86-575-342-010	HOLDER, WIRE 2	*	1
	2-40	★86-575-326-010	LEVER, RINK	*	1

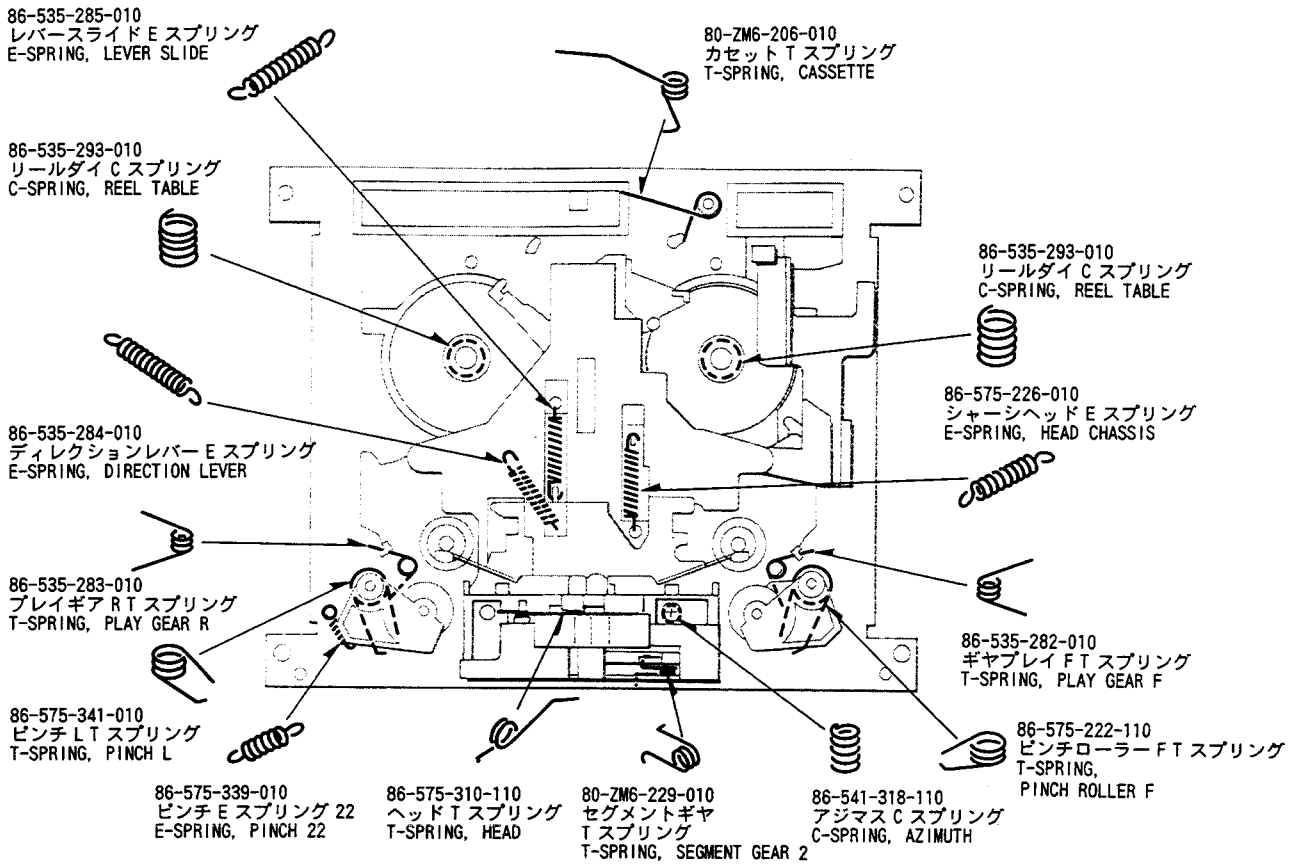
EXPLODED VIEW – 3 (FD – N5)

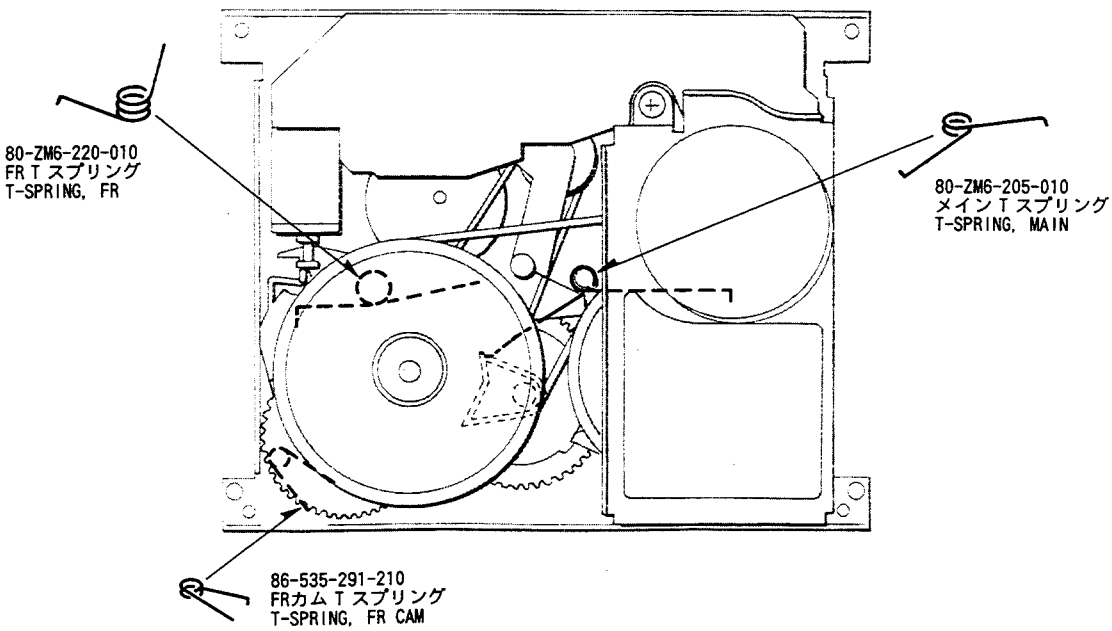
REF.NO.	PART NO.	DESCRIPTION
A	86-524-457-010	U_T+2.6-5.5
B	87-741-073-410	UT_2+2.6-6
C	87-081-501-010	VTT+2.6-4
D	87-081-489-010	PW1.7-3.5-0.25 SLOT
E	87-067-380-010	PW1.7-7-0.5
F	80-ZM6-211-010	PW2.68-4.15-0.3 SLOT



PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q. TY
	3-1	★86-535-291-010	T-SPRING, FR CAM		1
	3-2	★86-575-221-210	GEAR, PLAY	*	2
	3-3	★86-535-230-410	LEVER, PLAY TRIGGER		1
	3-4	★80-ZM6-220-010	T-SPRING, FR2		1
	3-5	★86-535-387-010	MYLAR, 2.3-5-0.88		1
	3-6	★86-575-328-010	GEAR, IDLER	*	1
	3-7	★80-ZM6-217-010	RING, MAGUNET 2		1
	3-8	★80-ZM6-218-010	LEVER, FR2		1
	3-9	★80-ZM6-222-010	SHAFT, PULLY FR		1
	3-10	★80-ZM6-221-010	GEAR, FR2		1
	3-11	★80-ZM6-227-110	BELT, SQ 1.2-140		1
	3-12	★80-ZM6-205-010	T-SPRING, MAIN		1
	3-13	★86-535-231-310	LEVER, PLAY TRIGGER		1
	3-14	80-ZM6-208-110	FLYWHEEL, ASSY 1.1		1
	3-15	86-575-302-110	BELT, SQ 1.3-213	*	1
	3-16	80-ZM6-203-010	FLAYWHEEL ASSY R1		1
	3-17	★80-ZM6-246-010	COLLAR, MOTOR		1
	3-18	★80-ZM6-228-110	PULLY, MOTOR 2		1
	3-19	★86-575-301-010	HOLDER, MOTOR	*	1
	3-20	★86-513-441-110	COLLAR		2
	3-21	★86-575-312-010	CAM, MAIN	*	1
	3-22	---	LEVER, PAUSE		1
	3-23	★80-ZM6-219-010	CAM, FR MK2 2M		1
	3-24	★80-ZM6-243-010	SHEET, 1.75-3.6-0.5		1
	3-25	★80-ZM6-242-010	SHEET, 1.95-3.6-0.5		1

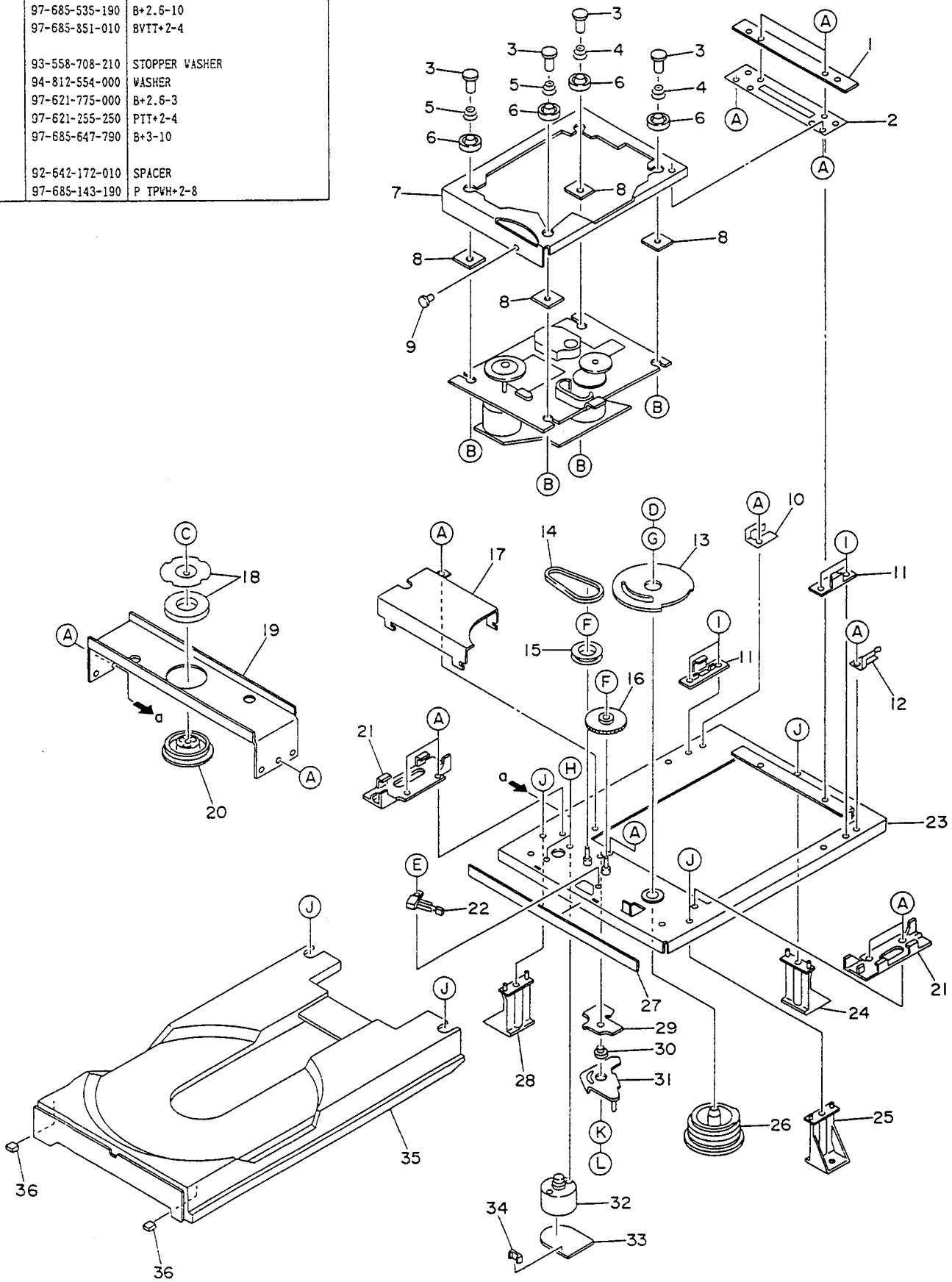
SPRING APPLICATION POSITION (FD－N5)





EXPLODED VIEW – 4 (FD – N5)

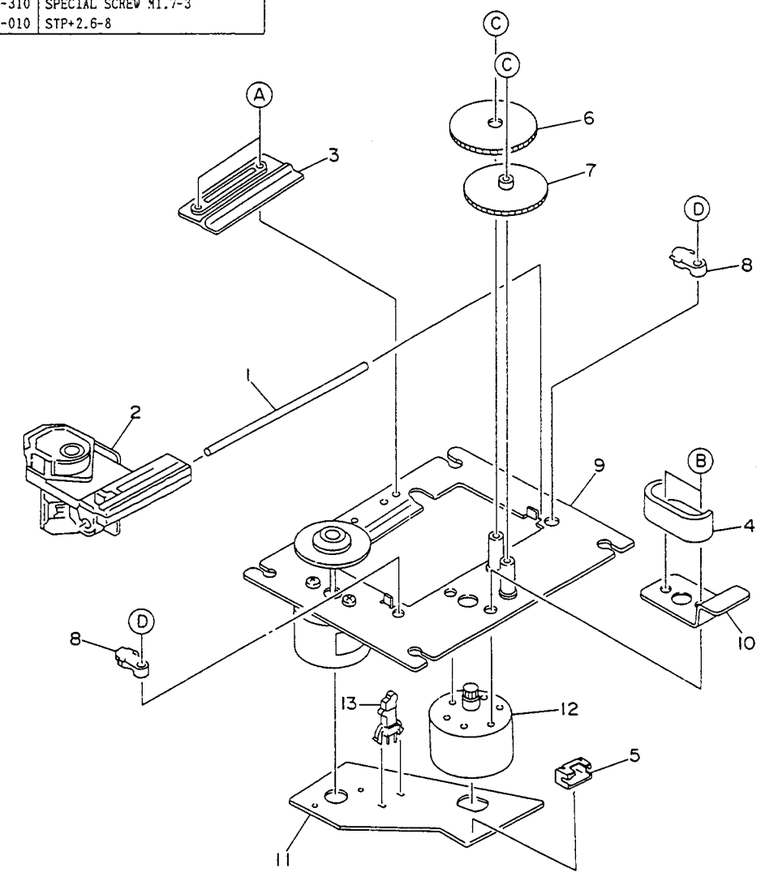
REF.NO.	PART NO.	DESCRIIPTION
A	97-685-862-010	BVTT+2.6-6
B	92-642-142-010	SCREW
C	97-685-132-190	B+2.6-5
D	97-685-535-190	B+2.6-10
E	97-685-851-010	BVTT+2-4
F	93-558-708-210	STOPPER WASHER
G	94-812-554-000	WASHER
H	97-621-775-000	B+2.6-3
I	97-621-255-250	PTT+2-4
J	97-685-647-790	B+3-10
K	92-642-172-010	SPACER
L	97-685-143-190	P TPWH+2-8



PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q. TY
	4-1	★92-642-170-010	HOLDER, HINGE		1
	4-2	★92-642-164-010	SPRING, HINGE		1
	4-3	★92-642-160-010	SHAFT, SPRING T		4
	4-4	★92-642-137-010	SPRING, COIL B		2
	4-5	★92-642-139-010	SPRING, COIL A		2
	4-6	★92-642-158-010	FOOT, C		4
	4-7	★9X-264-210-510	SPRING SUB CHASSIS ASSY		1
	4-8	★92-642-159-010	PLATE, SPRING T		4
	4-9	★92-642-169-010	ROLLER		1
	4-10	★92-642-147-010	GUIDE, TRAY L		1
	4-11	★92-042-102-030	HOLDER, TRAY		2
	4-12	★92-642-146-010	GUIDE, TRAY R		1
	4-13	★92-642-154-020	GEAR, SPRING DRIVE		1
	4-14	93-053-307-010	BELT, LM		1
	4-15	★94-913-731-010	PULLEY, LOADING		1
	4-16	★92-642-148-010	GEAR, SPRING RELAY		1
	4-17	★92-642-149-010	COVER, SPRING GEAR		1
	4-18	9X-264-210-810	MAGNET ASSY		1
	4-19	★92-642-165-010	CHASSIS, CHUCK		1
	4-20	★92-642-181-010	PULLEY, CHUCKING		1
	4-21	★92-642-161-010	HOLDER, FRONT TRAY		2
	4-22	★91-572-052-110	SWITCH, LEAF(OPEN/CLOSE)		1
	4-23	★9X-264-210-610	SPRING MAIN CHASSIS ASSY		1
	4-24	★92-642-512-010	HOLDER, MD BOSS REAR		1
	4-25	★92-642-510-010	HOLDER, MD BOSS		1
	4-26	★92-642-153-010	CAM, SPRING CONTROL		1
	4-27	★92-642-157-030	TAPE, FRONT		1
	4-28	★92-642-511-010	HOLDER, MD BOSS L		1
	4-29	★92-642-173-010	PLATE, RING		1
	4-30	★92-642-133-020	BOSS		1
	4-31	★9X-264-210-910	STOPPER RING ASSY		1
	4-32	9X-264-133-610	MOTOR ASSY(LOADING)		1
	4-33	★91-624-793-210	CD MOTOR 2 C.B		1
	4-34	★91-564-721-110	CONNECTOR, PIN 5P		1
	4-35	★92-642-156-010	TRAY		1
	4-36	★92-642-125-010	DAMPER		2

EXPLODED VIEW – 5 (FD – N5)

REF.NO.	PART NO.	DESCRIPTION
A	92-641-386-010	PTT+2-5
B	97-621-255-350	P+2-5
C	93-303-809-310	SPECIAL SCREW M1.7-3
D	92-641-447-010	STP+2.6-8



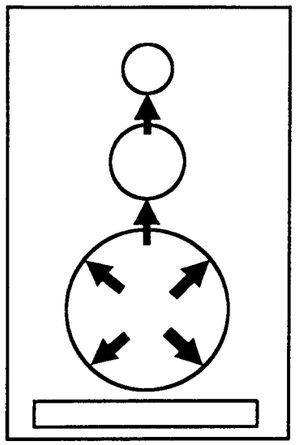
PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q. TY
	5-1	★94-910-431-010	SHAFT, SLIDE		1
	5-2	98-848-127-310	PICK UP(KSS-210ASRP)		1
	5-3	★92-641-443-020	HOLDER, SLIDE		1
	5-4	★92-641-434-010	COVER, GEAR		1
	5-5	★92-564-720-110	CONNECTOR, PIN		1
	5-6	92-641-404-020	GEAR, A		1
	5-7	★92-641-403-050	GEAR, B		1
	5-8	★92-641-448-020	CLAMP, SHAFT		2
	※5-9	9X-264-133-710	SP MOTOR ASSY(W/CHASSIS, T.T)(DISC)(RF-310T-11400)		1
	※5-9	9X-264-135-810	SP MOTOR ASSY(W/CHASSIS, T.T)(DISC)(MDN-4RA3NTAS)		1
	5-10	★92-641-371-010	STOPPER		1
	※5-11	★91-625-848-110	CD MOTOR 1 C.B(RF-310T-11400)		1
	※5-11	★91-628-263-110	CD MOTOR 1 C.B(MDN-4RA3NTAS/4RA3ETA)		1
	※5-12	9X-264-077-010	SLED MOTOR GEAR ASSY(SLED)(RF-310T-11400)		1
	※5-12	9X-264-134-410	SLED MOTOR GEAR ASSY(SLED)(MDN-4RA3ETA)		1
	5-13	91-572-053-110	SWITCH LEAF(LIMIT)		1

※Caution
Two types of the spindle (DISC) motor and sled motor are used, but they are not compatible.
Check the part numbers (MDN ···, RF ···) on the labels of motors and replace motors with the same one.

MODEL NO.

SX – N5

DISASSEMBLY INSTRUCTIONS (SX – N5)

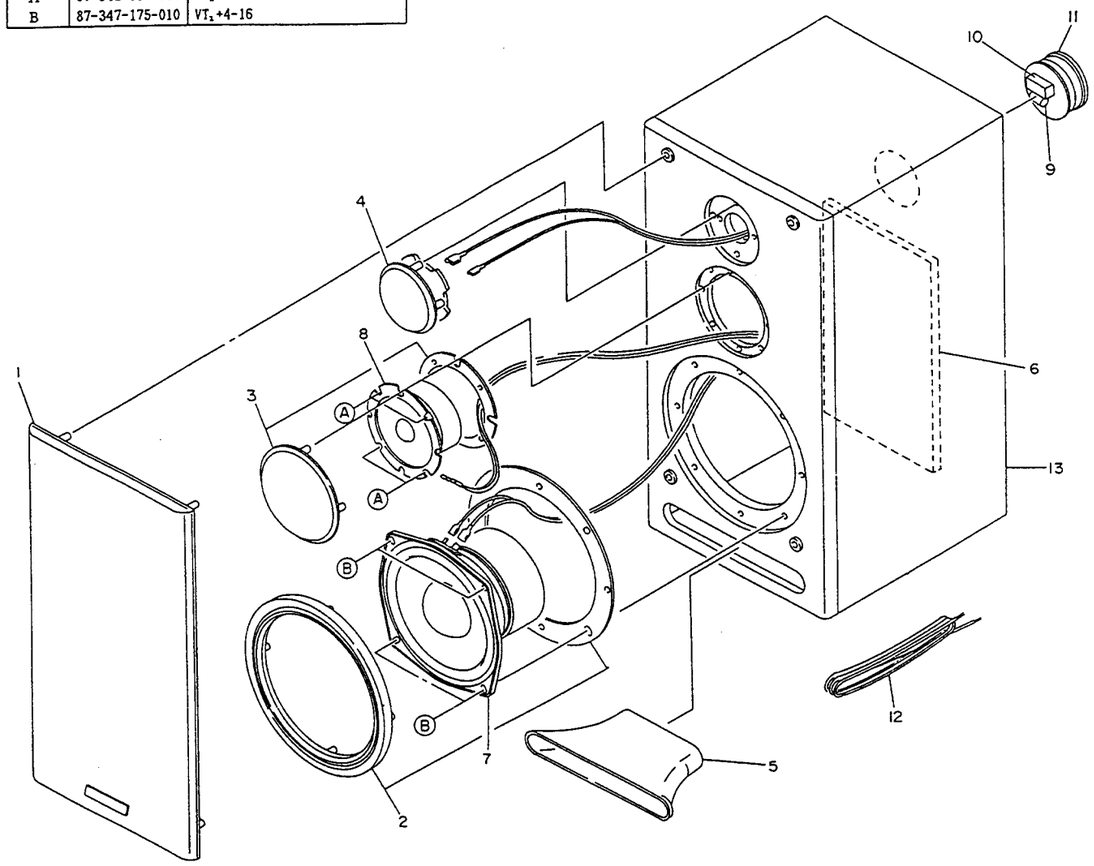


• Insert a flat-bladed screwdriver into the positions indicated by the arrows (shown in the figure on the left) and remove the grille assemblies of the woofer, mid-range speaker and tweeter. Remove the screws of each speaker unit and then remove the speaker units.

• SX – N5 (3-way speaker system)

EXPLODED VIEW (SX – N5)

REF.NO.	PART NO.	DESCRIPTION
A	87-342-097-010	VT_1+3-12
B	87-347-175-010	VT_1+4-16



■ SPEAKER LIST (SX – N5)

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q.TY
	1	★80-MSD-012-010	GRILL ASSY	※	2
	2	★80-VS2-005-010	PANEL W ASSY	※	2
	3	★80-VS1-012-010	PANEL M ASSY	※	2
	4	★80-VS1-013-010	PANEL T ASSY	※	2
	5	★80-VS2-004-010	DUCT	※	2
	6	★80-MSD-004-010	FELT	※	2
	7	80-MSD-602-010	SPEAKER W	※	2
	8	80-MSD-604-010	SPEAKER T	※	2
	9	★83-135-622-010	CAP,ELECT 2.2		2
	10	★81-672-627-010	RES, 2.7Ω 5W		2
	11	★83-149-611-010	TERMINAL		2
	12	★81-672-612-010	SPEAKER CORD		2
	13	- - -	CABINET		2

■ACCESSORIES/PACKAGE LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q.TY
	1	★80-MX3-905-018	INSTRUCTION BOOKLET E	※	1
	2	★81-653-647-010	AM – LOOP ANT (6T) CON (E,K)	※	1
	3	★81-653-645-010	AM – LOOP ANT (6T) NC (Z)		1
	4	★81-748-632-018	FEEDER ANT FM N (E,K)		1
	5	★81-748-632-010	FM WIRE ANT Z (Z)		1
	6	★80-MRD-018-019	REMOTE CONTROLLER RC – TN5LYB	※	1